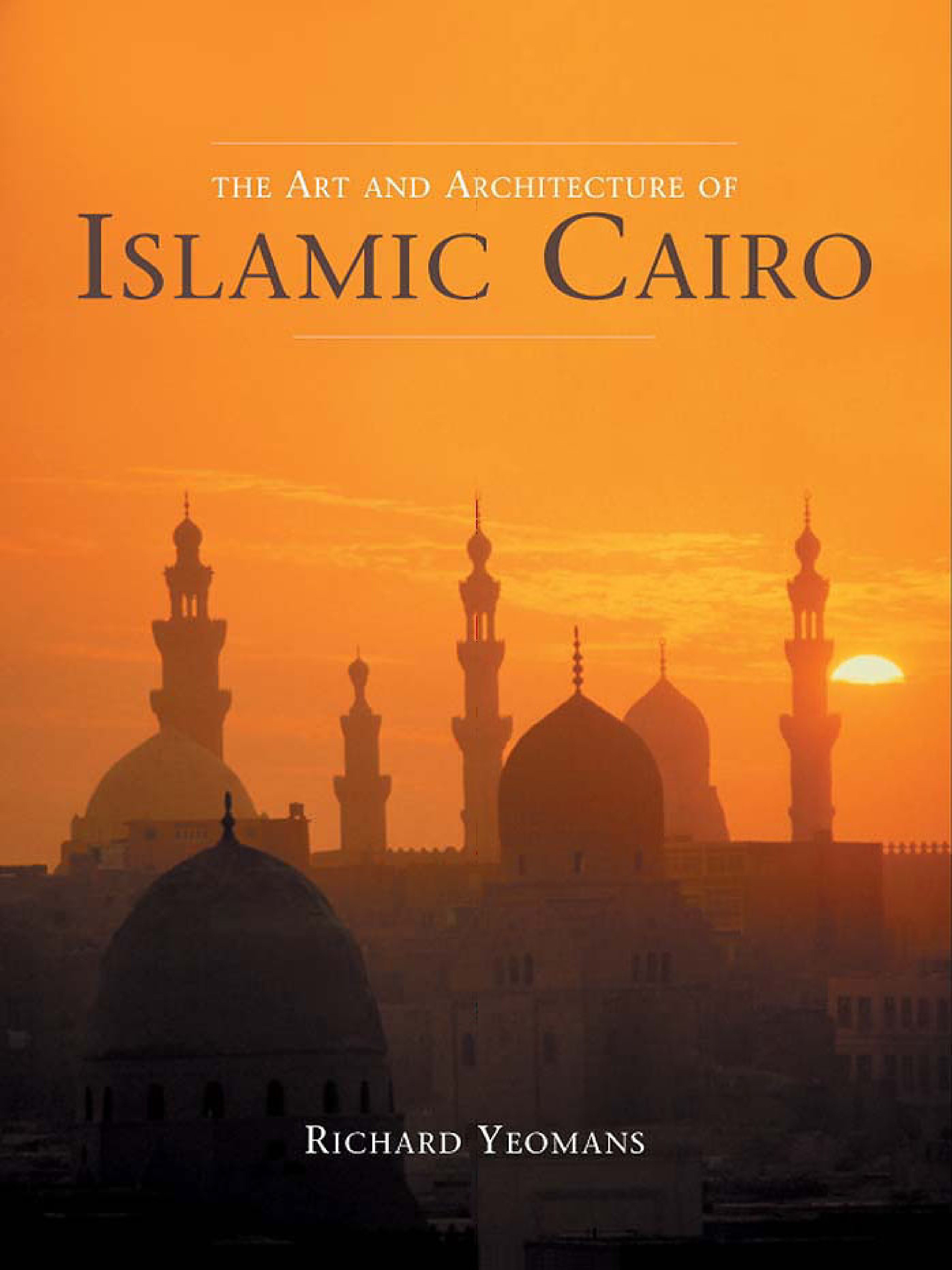
THE ART AND ARCHITECTURE OF ISLAMIC CAIRO



RICHARD YEOMANS

The Art and Architecture of

Islamic Cairo

Since Napoleon's invasion of Egypt in 1798, the western traveller has been obsessed with the Pharaohs and Egypt's ancient past. Her Islamic culture has been largely ignored, and the pyramids have been allowed to cast a long shadow over the visual culture of Islamic Cairo, obscuring a magnificent art and architectural heritage that has lasted over a thousand years, from the building of the Mosque of Amr in the seventh century to that of Muhammad Ali in the nineteenth. Cairo is full of masterpieces of medieval art and architecture reflecting the status of Egypt as the centre of several significant Muslim empires. The purpose of this book is to redress the cultural balance and examine the art and architectural treasures of Cairo from the Arab to the Ottoman conquests (642–1517).

Set within an historical narrative, the stylistic development of the visual arts is explained within changing religious, social and political contexts. Examples of the decorative arts – ceramics, glass, woodwork, metalwork, textiles and manuscripts – are examined in the Museum of Islamic Art, Cairo, and other major collections in Europe and the USA. Architecture and the decorative arts are dealt with separately with detailed descriptions, illustrating how the story of Islamic art and architecture is one of continuing adaptation and change.

By concentrating on Cairo's Islamic art and architecture, Yeomans has created a study of Islamic style which is unprecedented in its historical scope. Fully illustrated with over 200 vivid photographs, plans and elevations and a comprehensive glossary of architectural terms, this book will be essential reading for architects, designers and historians; indeed, for anyone with an appreciation of one of the world's finest and richest architectural legacies, tragically under threat.

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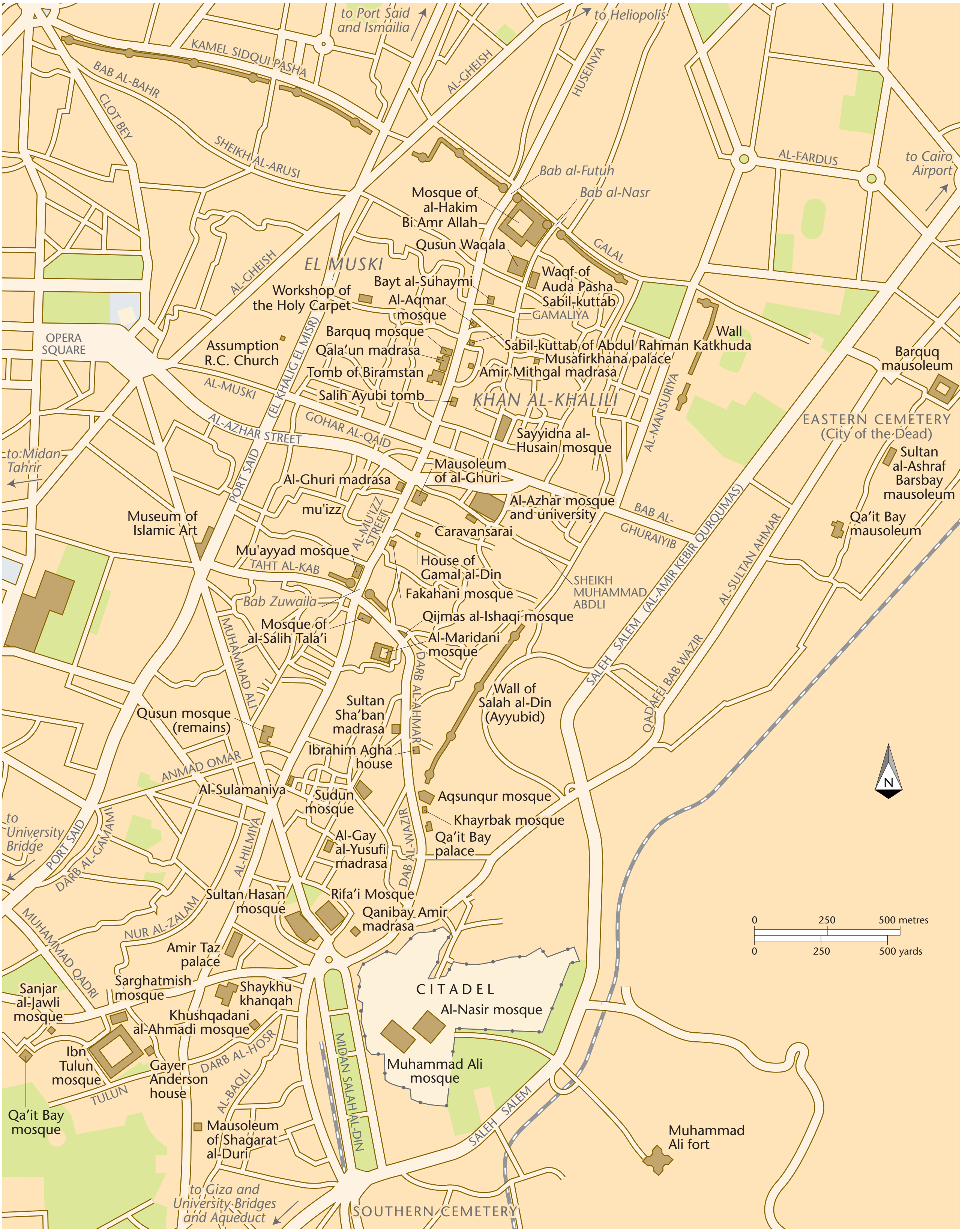
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Preface

When I first visited Egypt with a group of friends in 1964, I had no knowledge of Muslim culture and my sole purpose was to see the Pharaonic monuments that had excited my imagination since childhood. After spending two weeks in Luxor and Aswan, saturating ourselves in the art and architecture of ancient Egypt, we returned to Cairo to see if the city had anything else to offer other than the pyramids and the Egyptian Museum. We consulted our guide book and the pictures of the Citadel and Sultan Hasan's mosque aroused our curiosity, so we set out to explore Cairo's medieval monuments. It was in the frantic atmosphere of the Khan al Khalili area of the old city that I first encountered Islamic architecture in its living cultural context and the experience was spellbinding. It was something I had been completely unprepared for, and I woke up to the fact that Egypt had a vibrant Islamic culture with a magnificent architectural heritage lasting well over a thousand years. The point was further endorsed when I later visited the Museum of Islamic Art and saw the wealth of Islamic Egypt's decorative art. Nobody had told me about this extraordinary cultural achievement – my Eurocentric education had ignored it – and the depth of my ignorance was profound.

I have since made numerous visits to Egypt but in many respects little has changed with regard to Western ignorance of her Islamic culture. For most tourists, Egypt is the land of the Pharaohs and nothing else. In the West we have somehow managed to marginalize, in our perceptions, Egypt's Islamic identity and brushed aside nearly 1400 years of history. This may be explained by old animosities; the West is still ill at ease with Islam, so it seeks comfort in the familiarity and distance of the Pharaonic past. As Edward Said has observed:

> Underlying the contemporary American interest in ancient Egypt is therefore, I think, a persistent desire to bypass Egypt's Arab identity, to reach back to a period where things were assumed to be both simple and amenable to the always well-intentioned American will.[1]

Edward Said sees Western attitudes towards Egypt's ancient past as an expression of imperialism; having loosened our colonial hold on Egypt, a form of cultural colonialism took its place.

The first manifestation of this cultural colonialism occurred when Napoleon occupied Egypt between 1798 and 1801. He brought with him 167 scholars and set up the Commission of Science and Art and The Egyptian Institute to investigate 'this cradle of the science and art of humanity'.[2] The result was the publication of a monumental work, *Description de l'Egypte: Pupliée par les ordres de Napoléon Bonaparte*, ten folio volumes with 3,000 magnificent illustrations, first published in Paris in 1812. The next decisive event

occurred in 1821 when Jean-François Champollion (1790–1832) began deciphering hieroglyphics from the Rosetta Stone, thus initiating the birth of Egyptology. The contributions of such pioneering scholars as Auguste Mariette (1821–81), Richard Lepsius (1810–84), Sir John Gardner Wilkinson (1797–1875), Sir William Flinders Petrie (1853–1942), George Reisner (1867–1942), James Henry Breasted (1865–1935) and Howard Carter (1874–1939) secured Western domination in the field of Egyptology well into the twentieth century. Egyptology did not pretend to be about anything other than the study of ancient Egypt, and the spectacular success of its findings, climaxing with the discovery of Tutankhamun's tomb, ensured that only the Pharaonic world would capture the European imagination.

By comparison, Western scholars studying Islamic Egypt during the same period were extremely thin on the ground. The earliest accounts of Cairo occur in two works published in 1743: Richard Pococke's *Descriptions of the East* and Charles Perry's *View of the Levant*. Both explored the remoter parts of Egypt and it is interesting to note that Perry was prompted to leave Cairo because he was 'sick and surfeited' by endless discussions of the pyramids.[3] They were travellers rather than scholars and it was not until 1836 that any serious study of Islamic Egypt appeared. This was Edward William Lane's (1801–1876) encyclopaedic work, *An Account of the Manners and Customs of the Modern Egyptians*. It became a best-seller when it was first published as a companion volume to Sir John Gardner Wilkinson's *Manners and Customs of the Ancient Egyptians*. Lane's book is particularly useful because it described a society that had changed little since the Middle Ages. For this reason, a number of his observations tally with those of medieval historians, like al-Maqrizi (1364–1442), and they have occasionally provided useful contextual material for some of the buildings described in this book.

The next serious scholar to appear on the scene was Lane's grandnephew, Stanley Lane-Poole. His book *A History of Egypt* was published in 1901 as the last of a series of histories edited by Sir William Flinders Petrie. This is still the only adequate book in English devoted to the history of Islamic Egypt from the Arab to the Ottoman conquests. He also wrote the only book, *The Art of the Saracens in Egypt* (1886), that attempts a general survey of Islamic art and architecture in Egypt.[4] Another early history of epic proportions is A. J. Butler's classic work, *The Arab Conquest of Egypt*, published in 1902. Thereafter all the more recent histories available in English are mainly concerned with the period of the Crusades. Among others, these include Stephen Runciman's *A History of the Crusades* in three volumes (1951, 1952 and 1954), Amin Maalouf's *The Crusades through Arab Eyes* (1990), P. M. Holt's *The Age of the Crusades* (1986) and Peter Thoreau's *The Lion of Egypt: Sultan Baybars I and the Near East in the Thirteenth Century* (1987). With the exception of the Lebanese writer Maalouf, it could be argued that these excellent works provide further evidence of Eurocentric scholarship. More recently two extremely useful books, full of new topographical research, *Al-Fustat: Its Foundation and Early Urban Development* (1987) by Wladyslaw B. Kubiak and *Ayyubid Cairo: A Topographical Study* by Neil D. MacKenzie (1992), have been published by the American University in Cairo Press.

It is, however, generally the case that the shelves of libraries and bookshops are replete with books on Pharaonic and twentieth-century Egypt, but with the exception of the above-named volumes, there is very little that deals with the history in between. Of available books on the art and architecture of Egypt few cover the Islamic period. The two principal books on architecture are K. A. C. Creswell's *The Muslim Architecture of Egypt* (1959) and Doris Behrens-Abouseif's *Islamic Architecture in Cairo: An Introduction* (1989). There is also *A Practical Guide to the Islamic Monuments in Cairo* by R. Parker and S. Sabin – a very useful tourist guide. Of more recent books there are H. and A. Stierlin's *Splendours of an Islamic World: Mamluk Art in Cairo 1250–1517* (1997) and Anna Contandi's *Fatimid Art at the Victoria and Albert Museum* (1998). Three essential general works with excellent material on Egypt are *Islamic Architecture: Form, Function and Meaning* by Robert Hillenbrand (1994), *The*

Art and Architecture of Islam, 650–1250 (1987) by Richard Ettinghausen and Oleg Grabar and *The Art and Architecture of Islam 1250–1800* (1995) by Sheila Blair and Jonathan Bloom. Another invaluable book full of scholarly information is the *Blue Guide: Egypt* by Veronica Seton-Williams and Peter Stocks (1988). All the other material is contained in academic papers, catalogues and books dealing with separate branches of the decorative arts, such as Richard Ettinghausen's *Arab Painting* (1977) and Alan Caiger-Smith's *Lustre Pottery* (1991).

The purpose of this book has been to bring together the scholarship of these works and other recent material into one convenient volume. I have wanted, in effect, to create a book that would update what Stanley Lane-Poole attempted in 1886. It has involved fitting together pieces of a complex and incomplete jigsaw puzzle and contextualizing the material in one continuous narrative. By this means I hope I have made the material accessible and meaningful to the general reader. It is by its nature an eclectic work and I am particularly indebted to the above-named scholars whose works I have freely used, quoted and acknowledged. The book is also substantially based on personal observation and experience, since I spent many years drawing and painting the monuments of Egypt (both Pharaonic and Islamic) before undertaking this work. Above all, I would hope that this book helps redress the cultural balance by recognizing and celebrating Egypt's ignored and neglected Islamic art and architecture. The ignorance of the West is compounded by the neglect of the Egyptians themselves – a neglect due to a chronic lack of resources. John Romer and others, with all the publicity of television, have successfully drawn attention to the ecological dangers threatening Egypt's Pharaonic monuments. The same factors are causing Cairo's Islamic monuments to fall apart, as well as recent earthquake damage and general neglect. Cairo's buildings need rescuing as urgently as those of Venice. We all know that Venice is beautiful and unique, but the task ahead is to persuade the rest of the world that the same is true, in a very different way, of the buildings in Cairo. I would be more than happy if this book contributes in some small measure towards that end.

INTRODUCTION

Egypt and the Arab Conquest

The Arab conquest of Egypt began in 639 in the wake of a number of extraordinary military campaigns that secured Muslim rule in Palestine, Syria and Iraq shortly after the Prophet Muhammad's death in 632. The success of these victories can be explained by the religious certitude and energy of the fledgling Muslim nation, and by the ruinous state of affairs that prevailed in the Middle East following a long period of conflict between the Byzantine and Persian empires. This surge of energy from Arabia expressed the continuity of a movement that had begun with the Prophet's ministry in 610 and gathered pace as he united the disparate polytheist Arab tribes under one religious, social and political order. Out of these scattered peoples he created a nation, but it was not to be a nation limited by the boundaries of the Arabian Peninsula. Islam had an expansionist agenda, and a momentum had been created which outlived the Prophet because his immediate successors, the caliphs Abu Bakr, Omar, Othman and Ali, directed it towards conquest. They understood that conquest was the best means of extending the Prophet's mission, and following his death they also recognized that continuing military action was necessary in order to prevent any regression towards the pre-Islamic state of tribal disorder and fragmentation.

The Arabs were aided in their campaigns by the volatile conditions that existed in the Byzantine and Persian empires after their long and bitter wars, described by Edward Gibbon as 'undertaken without cause, prosecuted without glory, and terminated without effect.' Nowhere in the Byzantine empire was this volatility more manifest than in Egypt, which had endured years of misrule,

exploitation and persecution under Byzantine control. With the outbreak of the Persian war, Egypt suffered further repression under ten years of Persian occupation. The war between Byzantium and Persia began after the bloody accession of the Emperor Phocas in 602. It was a war the Byzantines were ill-prepared for, and within four years they suffered a number of humiliating defeats as the Persians conquered most of Mesopotamia, Armenia and Syria, penetrating Anatolia as far as Chalcedon, within striking distance of the Byzantine capital, Constantinople. Throughout this conflict Phocas made matters worse by alienating most of his subjects through his autocratic, cruel and paranoid rule. He was eventually deposed in 610 by a rebellion led by Heraclius, but the war continued and the empire collapsed as the Slavs and Avars occupied the Balkans and the Persians continued their advance into Palestine and Egypt.

When the Persians captured Jerusalem they massacred the population, destroyed the Church of the Holy Sepulchre and stole the holy relics, including the True Cross, Lance and Sponge. They then advanced on Egypt, and Alexandria capitulated after a short siege in 618. The Persians entered the city, butchered or enslaved most of the population and initiated a reign of terror that spread throughout the country. The subjugation of Egypt took three years, during which time the Coptic monasteries were systematically plundered and the monks scattered or slaughtered. Once the bloodletting was over, Egypt, like Syria and Palestine, settled down to Persian rule and tranquillity was restored. For the first time the Copts were able to enjoy a degree of religious freedom denied to them under the Byzantines. The Copts were the indigenous descendants of the ancient Egyptians, who later became Christians and formed the independent Coptic church after the ecumenical council of Chalcedon in 451. Their religious freedom was, however, short-lived. After a series of brilliant land victories Heraclius defeated the Persians, the empire recovered and in 618 Egypt was returned to Byzantine rule. The status quo was restored but persecution and misrule resumed when Heraclius attempted to impose his will on the churches of Egypt.

Egypt was a country riven with bitter ethnic, social, political and religious divisions. On the religious front, Christians were at odds with Jews, and the Christian community was broadly divided between the Melkite and Coptic churches. More than anything else, it was religious conflict that helped the Arab cause, and this is why it is necessary to briefly explain its nature and background. The

Melkite church was the orthodox church of the empire, but the Copts, who formed the overwhelming majority of the population, were Monophysites. The split between the two was essentially theological, but in the course of time their differences became progressively politicized. Such was the case in many other parts of the empire where Melkite orthodoxy was associated with imperial control, and in response the heterodox Monophysite and Nestorian churches increasingly became a focus for regional dissent and independence. The Coptic church in particular became an arena for nationalist feeling, for the Copts had good reason to be proud of the leading role Egypt had played in shaping early Christianity. Egypt was the spiritual birthplace of monasticism, and it was Alexandria, through the learning of its catechetical school, that introduced the tools of Greek philosophy into Christian theology.

It was this philosophical climate that initiated the great Christological debates that dominated the ecumenical councils of Nicaea, Constantinople, Ephesus and Chalcedon. These councils, in which the Alexandrian clergy played a leading role, were set up to define and regulate doctrine. The issues debated concerned the nature of Christ, his relationship with the Father and whether he was begotten or unbegotten. Disputation along these lines had already begun in Alexandria when the priest Arius put forward his doctrine that God was unbegotten, eternal and without beginning. He reasoned that unlike the Father, the Son was begotten, born in time and therefore not of the same nature as the Father. This doctrine was rejected at the ecumenical council of Nicaea (325), and it was the brilliant Alexandrian theologian Athanasius who defined the orthodox position and played a principal role in formulating the Nicene Creed. The Nicaean council ruled that Christ was begotten but of the same substance as the Father. Arius was banished, but his doctrine endured and later attracted many supporters. The second ecumenical council of Constantinople (381) also rejected Arianism, adding clauses to the creed defining the nature of the Holy Spirit. It also proclaimed the supremacy of the See of Rome over Constantinople. This declaration, relegating Alexandria to third place in the church hierarchy, caused riots in the city and precipitated the separation of the Egyptian church. The final break came with the fourth ecumenical council of Chalcedon (451), which tried to enforce the doctrine of ‘one in two natures’. The Egyptian church rejected this and upheld its belief in the overwhelming supremacy of Christ’s divine nature over the human, thus affirming what became the Monophysite position.

The ecumenical councils defined orthodoxy, but the issues ultimately left the church in a state of fragmentation. Despite attempts to impose Melkite orthodoxy from Constantinople, Arius still had followers, the Nestorian church went its separate way and Monophysitism prevailed in many parts of the empire. In the face of these schisms, Heraclius tried to unite the churches with a doctrinal compromise known as the Monothelite doctrine. This proposed that Christ had two natures, human and divine, but one will and energy. It was accepted in some parts of the empire, but rejected in Egypt by both Copts and Melkites. Rather than persuading the Egyptians, Heraclius tried imposing the doctrine on them through his newly appointed patriarch, Cyrus, who was given absolute power in the joint offices of Governor of Egypt and Imperial Patriarch of Alexandria. The Copts refused to countenance anything that threatened their independence and the Melkites rejected the doctrine as Monophysitism in another guise. Despite the resistance of both parties, it was the Copts who were singled out for special punishment and Cyrus unleashed a policy of brutal persecution that lasted for the best part of ten years. The Coptic Patriarch Benjamin was driven into exile, church leaders were tortured and executed, and the Coptic communion was driven underground.

Religious dissension and persecution were not the only factors that explain Egypt's disarray at the time of the Arab conquest; there was also ethnic, social and political division. By its very nature Egyptian society was complex, pluralist and cosmopolitan. Since the foundation of the Ptolemaic dynasty in 323 BC, the ethnic make-up of Egypt, and of Alexandria in particular, had been complex. During Ptolemaic times the ruling class was Greek and owned most of the land. The culture of the court was Greek, and it is significant that only the last monarch of that dynasty, Cleopatra VII, bothered to learn the Egyptian language. There was a broad division between 'Hellenes' (Greeks) and Egyptians, with the former including settlers from the wider Hellenistic world. However, as R. S. Bagnall has pointed out, ethnicity was mutable, and the status of Hellene could also include those from an Egyptian background who rose to hold high office.[1] The Romans in their turn introduced new hierarchies based on citizenship, which ensured that the native Egyptians and rural populations remained at the bottom of the social ladder. Under Byzantine rule the vast majority of Egyptians (now mostly Copts) also held little status and, as Butler has observed, Egypt was essentially a society ruled for the benefit of the rulers.[2]

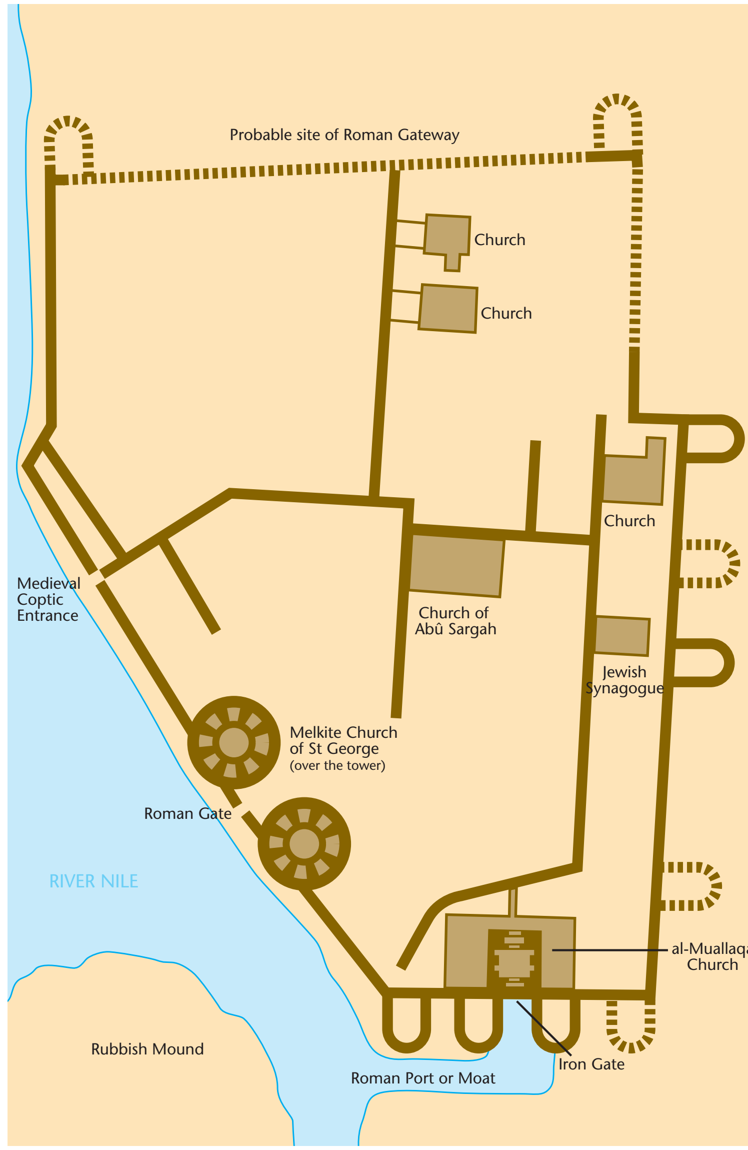
Besides the Hellenes and Egyptians, the Alexandrian community consisted of Syrians, Persians, Arabs and Jews. Egypt had been a refuge for the Jews since the time of Nebuchadnezzar, and they formed significant colonies in Aswan, Memphis and Alexandria. Under Caesar Augustus the Alexandrian Jews were granted a degree of autonomy and privilege which caused much jealousy and hostility among the Greeks.[3] After the Jewish diaspora of AD 70 the city accommodated the largest Jewish community outside Palestine, and discord between them and their Greek, Roman and Christian neighbours remained a continuing factor in Alexandrian life. At the time of the Arab conquest the population of Jews in Alexandria numbered 70,000.[4] With the Persian conquest of Syria and Palestine in 615 the city increased its population with a new influx of refugees, including a number of Syrian bishops. One consequence of this was the union between the Coptic and Syrian churches, a union which strengthened Monophysite resistance to Byzantine rule. There was, however, no unity in this diversity, and when the Arabs arrived in 639 they found a society in which all the factions – rulers and ruled, Melkites and Monophysites, Christians and Jews – were at odds with each other.

The Arab conquest was spearheaded by one of the Prophet's most illustrious Companions, Amr ibn al-As, who had intimate knowledge of Egypt through his previous trading contacts there. He had distinguished himself as a soldier in the Syrian campaigns and his great ambition was to secure Egypt for Islam, thus gaining in the west what Khalid ibn al-Walid (known as the Sword of Islam) had achieved in Syria. Amr put forward his invasion plans to the caliph Omar, arguing the necessity of striking Egypt in order to forestall a possible attack from that quarter by the former Byzantine governor of Jerusalem. Recognizing the dangers of Amr's scheme, Omar was equivocal, but he sanctioned an expeditionary force of approximately 4,000 men. This was quickly dispatched to the border, but before entering Egypt Amr was intercepted by messengers who delivered a letter from the Caliph. Sensing the import of its contents, Amr chose to ignore it until he reached al-Arish, just inside Egyptian territory. His intuitions were justified because the letter instructed him to return if his men were still in Palestine, but to proceed if he had reached Egypt.

Following the coastal route, the Arabs took Pelusium and Bilbays, but rather than advance on Alexandria they turned south to capture the fortress of Babylon, which occupied a critical position at the apex of the Nile Delta. Without the capture of this stronghold

any further conquest of Egypt would have been impossible. Its strategic position was vital at this stage in the campaign, and because communications with Medina were good, Amr subsequently made it his military headquarters. More importantly, it was from this base, just outside the fortress of Babylon, that the city of Fustat and eventually Cairo grew. Babylon was situated on the east bank of the Nile opposite the island of Rawdah, and its site today encompasses Coptic Cairo in the heart of Misr al-Qadimah, the old city of Cairo. Babylon was constructed principally to defend the bridge and ferries that crossed the Nile at this point, linking the main road between the ancient cities of Memphis and Heliopolis. It also safeguarded the entrance to Trajan's Canal which connected the Nile to the Red Sea (although at the time of the Arab conquest this was silted up). A bridge of boats joined Babylon to the island of Rawdah, which was also heavily defended and garrisoned.

The fortress of Babylon was built by Trajan at the end of the first century AD, but it occupied the site of earlier military settlements going back as far as the Persian occupation of Egypt in the sixth century BC. Sources differ in their suggestions as to who founded it – Nebuchadnezzar, Cambyses or Ataxerxes – but there is a consistent tradition that Persian settlers occupied the site, thus giving it the name of Babylon-in-Egypt.[5] Another suggestion is that the name may be derived from Bab li On, or 'Gate to On', the ancient biblical name for Heliopolis.[6] The fortress had its own harbour, moat and ditch, and its walls contained a significant civilian population, accommodating a number of churches, a market, a granary and all the amenities of a self-sufficient town.[7] Much of Trajan's fortress survived well into the nineteenth century, and A. J. Butler's plans show an irregular quadrilateral curtain wall nearly 2.5 metres thick, with ten projecting bastions on the north, east and south sides.



ABOVE: The fortress of Babylon.

Opening on to the river on the west side was the River Gate flanked by two large circular towers, the ruins of which survive today.[8] It is estimated that the fortress could maintain a garrison of 1,000 men and this number could be doubled in times of emergency.[9]

Of the surviving circular towers, only the remains of the southern structure are externally visible. The northern tower is now incorporated into the monastery of St George. The south tower is a hollow cylinder, 34 metres in diameter, made of smooth cut stone at the base and alternating courses of rougher stone and flat brick above. The tower contained an inner cylinder forming two concentric circles in the plan. The space between these cylinders was sectioned by radiating walls, like the spokes of a wheel, dividing the outer circle into eight rooms. As W. B. Kubiak has noted, this unique structure was most likely designed to withstand water pressure rather than siege engines.[10] It probably guarded the bridge of boats linking Babylon to Rawdah Island, as well as the entrance to Trajan's Canal. The southern gate, or Iron Gate, served as the main entrance and access to this was also by water. The remains of this gate can now be seen under the Church of the Virgin, or al-Muallaqa church, which is built over two of its south-western bastions. Whether a town existed outside the fortress walls at the time of the Arab siege has been a matter of debate. Ancient sources give conflicting evidence, but more recently Kubiak has pointed to archaeological evidence suggesting traces of earlier perimeter walls enclosing a larger settlement. The fact that by 639 Babylon had contracted to accommodate a smaller population indicates there was no significant population outside the walls except scattered monasteries and farmsteads.[11]

More significantly, the population that eventually took up residence outside the fortress was Amr's army which, since the capture of Bilbays, had constantly been on the move awaiting reinforcements. When a force of 12,000 men eventually arrived, including some of the best commanders the Arabs could muster, he was in a position to take on the Byzantine forces deployed around the tip of the Delta. Now based in Heliopolis, Amr managed to draw the Byzantines into open battle, and in July 640 he crushed their army by dividing his forces and attacking them from the front, flank and rear. The remnants of the Byzantine army took refuge in Babylon and Amr set up his encampment on its northern side. They were unable to take the fortress because of their inexperience of siege warfare, and what was left of the Byzantine army could not challenge Amr's military superiority. The situation was a stalemate and throughout the lengthy investment a number of

negotiations took place between Cyrus and the Arabs. Amr had the upper hand and presented Cyrus with three options: (1) conversion to Islam with equality of status; (2) religious freedom and protection, but extra taxation and second-class citizenship; or (3) war to the bitter end. Cyrus, being a realist, accepted Amr's terms for religious freedom, subjection and taxation.

A treaty was drawn up and Cyrus returned to Constantinople to have it ratified, but Heraclius refused to accept it, regarding it as a treasonable sell-out. Cyrus was then vilified and sent into exile. Before the matter could be resolved, Heraclius died, and the empire was thrown once more into chaos. In the absence of firm leadership from Constantinople, no resolution was possible and the truce at Babylon broke down. The besieged Byzantines were weakened by plague, and the death of Heraclius, coupled with bleak prospects of reinforcements, lowered their morale. Eventually the Arabs scaled the walls and gained a foothold in the fortress, which quickly surrendered. After seven months, the siege of Babylon ended on 9 April 641. Amr then proceeded to complete his conquest of Egypt, and after subduing the Delta towns he set about besieging Alexandria. For an army with no equipment and little knowledge of siege warfare, the task of taking Alexandria was daunting. The city had formidable walls and was protected to the south by the canal and Lake Mareotis, and to the west by the Dragon Canal. In addition, the Arabs had no naval power and little prospect of taking the city from the sea.

On the face of it Alexandria was unassailable and could easily have withstood a long siege had it not been for the panic, turmoil and division within. The corruption, incompetence, religious dissension and political infighting that facilitated the Persian conquest in 618 also served the Arabs in 641. The Blue and Green factions (named after chariot teams) were responsible for rioting in the streets and intrigue followed intrigue. Matters stabilized briefly when Cyrus eventually returned from exile and his presence raised morale. However, he still believed that it was necessary to come to terms with the Arabs and with this in mind he secretly left Alexandria and went to Babylon to negotiate a new treaty with Amr. The Treaty of Alexandria was signed in November 641, and it effectively handed over the whole of Egypt to the Arabs. Among other things it agreed the payment of the poll tax, religious toleration for both Christians and Jews, protection of church property and a truce leading to the evacuation of the garrison at Alexandria over a period of eleven months. It was also agreed that no Byzantine army would return to attack Egypt.[12]

The treaty was ratified by the caliph Omar and the new emperor Heraclonas agreed its terms in the last month of his short reign. The negotiations between Amr and Cyrus had been carried out in secret, but when the conditions of the treaty were revealed to the Alexandrians there was surprisingly little opposition. There was a sense of war-weary relief, and the guarantee of equality and religious freedom for the Jews and Christians of all denominations made it welcome in many quarters. Above all, Amr's poll and land taxes seemed less punitive than those levied by Constantinople. The only losers were the army and the ruling classes who no longer had a stake in the country. These joined a general exodus, but there was no difficulty in filling high administrative posts with Jews, Christians and converts to Islam. The Arabs were essentially a military class and they were totally dependent on Christian civil servants to maintain the machinery of government.

Amr sought advice from the Coptic patriarch, Benjamin, on how best to raise revenue and it was on this issue that relations between Amr and Omar deteriorated. Omar complained that Egypt yielded too little tribute money, but Amr argued that excessive taxation was counterproductive. The outcome of this dispute was that Amr was demoted, and Abdallah ibn Sa'id took over. When Othman became caliph, Amr was further reduced in rank, and Abdallah (who was Othman's foster brother) was appointed governor of Egypt. The burden of taxation increased and this prompted a number of leading Alexandrian citizens to appeal for intervention from Constantinople. Seeing an opportunity of restoring Egypt to Byzantine rule, the emperor Constans immediately dispatched a huge fleet to Alexandria. The city was easily retaken and the Byzantine army, led by Manuel, penetrated the Delta, seizing a number of towns. Amr was quickly reinstated as military commander and, advancing from Babylon, he defeated Manuel's army after a gallant and bitter struggle. The remnants of the defeated army took refuge in Alexandria, and Amr followed, positioning his army to the east of the city in anticipation of a long siege. However, with the help of inside intelligence his forces managed to penetrate the walls, and because the terms of the treaty had been breached the city was brutally sacked and its fortifications destroyed.

As a token of his gratitude Othman awarded Amr the title of commander-in-chief of the army, but he insisted that Abdallah ibn Sa'id retain supreme political and fiscal power. Amr declined the offer with the remark, 'I should be like a man holding a cow by the horns while another milked her'. Retiring from Egyptian politics

altogether, Amr subsequently played an active role in the events leading up to the foundation of the Umayyad caliphate. These events, which changed the course of history, were the consequence of a power struggle between Ali, the fourth caliph, and Mu'awiya, the governor of Syria (and Othman's nephew). Ali became caliph after the murder of Othman, but his lack of resolve in prosecuting Othman's assassins prompted a rebellion. Mu'awiya refused to give Ali his support and instead demanded retribution for his murdered uncle. When the two protagonists eventually confronted each other at the battle of Siffin, Amr sided with Mu'awiya. The battle itself was inconclusive but Amr's involvement in the ensuing arbitration was decisive in weakening Ali and strengthening Mu'awiya's credibility as an alternative leader. When Ali in turn was assassinated two years later, Mu'awiya was proclaimed caliph. The political centre of Islam moved from Medina to Damascus, and Amr was reinstated as governor of Egypt where he ruled from the new capital of Fustat until his death at the age of ninety-one in 663. He was buried at the foot of the Muqattam Hills, but unlike his son, Abd Allah, whose tomb is greatly revered in Amr's mosque, there is no trace of his grave.

Chapter One

Umayyad and Tulunid Architecture: Fustat and al-Qata'i

Fustat

When the Arabs entered Alexandria they were overwhelmed by its architectural splendour. Amr sent a letter full of hyperbole to Omar stating that he had 'captured a city from the description of which I shall refrain. Suffice it to say that I have seized therein a city of 4,000 villas with 4,000 baths, 40,000 poll tax paying Jews and 400 places of entertainment for royalty.'[1] The figures are grossly overstated but the letter expresses something of the opulence and brilliance of the city reported in other Arab sources. It was the jewel in the crown of conquest, and Amr, finding a number of deserted villas and palaces, was tempted to make it his seat of government. Omar, however, had different ideas, insisting that the capital of Egypt should be near Babylon where communications with Medina were more reliable. He is reported to have said that he did not want water between himself and his Muslim army, acknowledging Alexandria's isolation and vulnerability during periods of flood. The Arabs had no navy and the city was virtually unprotected on the seaward side.

Its orientation towards the Mediterranean was also symbolic of its cultural roots in the Graeco-Roman world. Omar may well have been concerned with preserving the cultural integrity of the Arabs, and he did not want to see his army seduced by Alexandria's magnificence and luxury. So far these abstemious desert warriors had been incorruptible, and it was not in Omar's interests to allow them to settle in the city or on land, as he needed their mobility and strength for other campaigns. During the siege of Babylon they had been renowned for the austerity of their ways. They were described

as 'a people who love death better than life, and set humility above pride, who have no desire or enjoyment in this world, who sit in the dust and eat upon their knees, but frequently and thoroughly wash all their members, and humble themselves in prayer: a people in whom the stronger can scarce be distinguished from the weaker, or the master from the slave.'[2] This reputation for endurance, simplicity and unworldly character contributed to their image of moral and military invincibility. Omar recognized this and refused to allow it to be corrupted by soft living.

In their dealings with the Byzantines, the Arabs were justified in feeling a sense of moral superiority, but in cultural matters they were undoubtedly inferior. As in Syria, Palestine and Iraq, they found themselves ruling a society that was culturally far more sophisticated than their own. Their response to this was an odd mixture of profound admiration, distaste and resentment. While they were obliged to learn from, use and build on the commercial, administrative and artistic expertise of the non-Arab population, they were also anxious to establish their own identity and way of doing things. For this reason, in establishing a new seat of government, it was natural for them to desire a clean slate and distance themselves from the cultural influence of Byzantium. The new capital situated next to Babylon was named Fustat, and it answered psychological as much as strategic needs. Communications were good, and Omar, who kept a very tight reign on his armies (and Amr), appreciated the fact that messages transmitted between Babylon and Medina took less than a week. Omar was also keen to see the restoration of Trajan's Canal, which linked Babylon to the Red Sea, so that Egypt's surplus agricultural produce could be shipped to Arabia and other parts of the empire.

The plan and development of Fustat mirrors the pluralism of Arab society, which in many respects was more complex and diverse than that of Alexandria. The Arab nation, like Islam, has



ABOVE: The site of al-Fustat.



ABOVE: Ethnic groups and multi-tribal quarters.

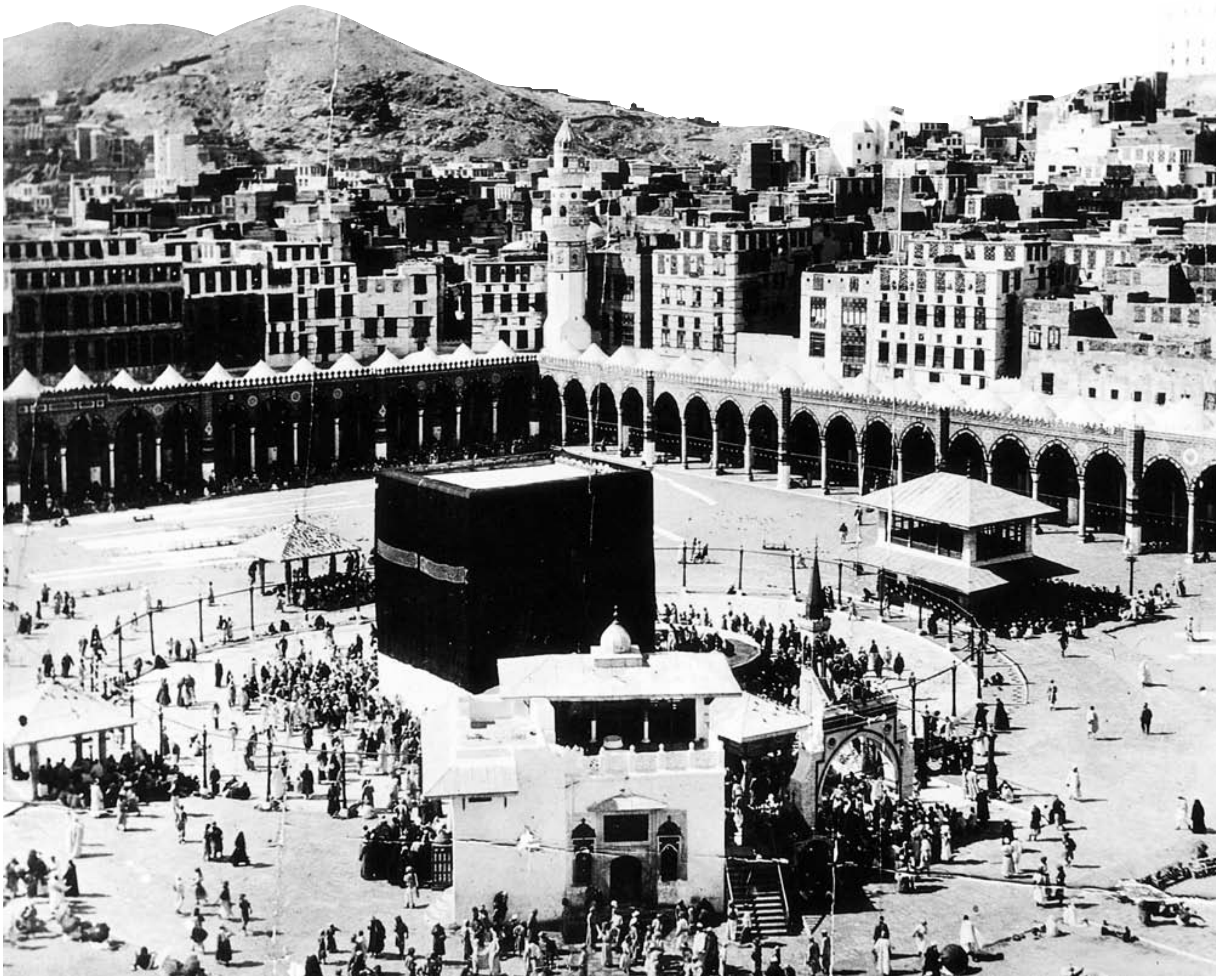
never been monolithic. Fustat grew out of a military camp town, and its neighbourhoods were laid out to accommodate a complicated array of discrete tribes and clans with various branches and subdivisions. To name but a few ethnic groups and tribal quarters, some of the following are listed by Wladyslaw Kubiak: the Ahl ar Raya, Tudjib, Lakhm, al-Lafil, As Sadif, Khaulan, Madhidj, Murad, Saba, Yashkur, Ghafiq, Mahra, Rashida, Qarafa, al-Azd, Az Zahir, Hadramaut, Himyar, Wa'il, Wa'lan and so forth. In addition to the Arabs, there were Byzantine and Jewish converts, native Egyptians, Persians, Ethiopians, Nubians and other nationalities who joined the Arab campaign.[3] Besides these there were slaves, retainers and dependants. These ethnic groups were mainly professional soldiers, but their backgrounds were varied; some were Bedouin, but others came from agricultural regions or thriving commercial centres like Mecca.

Each group was given an allotment, and its size and location reflected the ethnic, tribal and economic status of the group from which they came. Similar allocations were made during the founding of Baghdad just over a century later, but there comparisons end. Baghdad was a circular city and the tribal allocations were as if compartmentalized between the spokes of a wheel near its circumference. No such symmetry prevailed at Fustat, which at first glance seemed totally fortuitous in its composition. Its organic nature reflected with accuracy the ethos and organization of a military encampment. It also carried with it some of the values and traditions of Bedouin life. Centrally grouped near the mosque were the tribes close to Amr, such as the Ahl ar Raya, a multi-tribal unit, reflecting its senior position at the centre of command. The vanguard, consisting of the Rashida, Riya, al-Qabad and Wa'il, was situated in the south, and the rearguard of non-Arab tribes settled in the north. Non-Arabs were generally segregated from Arabs. Such arrangements provided a loose starting

point for urban development, but as Kubiak has pointed out, there is a difference between a temporary encampment and permanent settlement, and when the final allocations were made they had to plan in terms of larger land units to allow for extended families, animals and limited space for cultivation. In total there were probably between thirty and forty tribal units.[4]

The first occupation was purely military, but the soldiers were later joined by their households who wished to share their bounty and good fortune. The population increased through the high birth rate and the immigration of other groups from Arabia and Syria. Entire tribes, not involved in the original conquest, migrated from Arabia to Fustat. According to Kubiak, one consequence of the Arab conquests was the acquisition of considerable numbers of black and white slaves from Nubia and the Mediterranean. In the course of time their population possibly equalled in number that of the Arab settlers.[5] By the reign of Mu'awiya the registered population of Fustat had trebled to 40,000 and restrictions on non-Muslim settlement began to ease. As in other parts of the empire, the role of the ruling military caste gradually diminished as the new order demanded the skills of clerks, administrators, bankers, merchants, artisans and those most able to contribute towards a peacetime economy. The professions which the ruling elite had so far abjured were now in demand, and they needed the skills of the native Egyptians. As a consequence, the Coptic population was encouraged to increase on the outskirts of the city, and they were allowed to build new churches. Some, such as St Menas and St Mary, were established deep within the Arab quarters near older Coptic foundations like Abu Shenuda.

The building activity of the Copts only highlighted the lack of such skills among the Arab population. The Arabs brought with them a sophisticated degree of military, political and mercantile acumen, but their artistic genius was confined mainly to oral poetry and not the visual arts. They could spin, weave and produce simple pots and household items, but they lacked the skills for making luxury goods. According to Oleg Grabar, most luxury goods in Arabia were imported, and those which were not were made by non-Arabs, mostly Jews.[6] Coptic craftsmanship was also well known and appreciated in Arabia. In addition to Chinese silks, Coptic textiles were imported and sold in the markets and fairgrounds of Mecca, and the cushions and curtains owned by A'isha (the Prophet's youngest wife) were possibly Coptic. It is recalled in the *Hadith* ('Traditions') that the Prophet asked her to remove a



ABOVE: The Ka'ba at Mecca.

curtain because the embroidered figures distracted him from his prayers (his attitude in this matter contributed to the Islamic prohibition of figurative art in the mosque).[7]

Besides imported goods from Egypt, a number of accounts record the presence of Copts in Arabia and their particular skills. One tradition states that a Coptic carpenter, called Pacomius, helped restore the Ka'ba in the Meccan sanctuary. The Ka'ba – the spiritual heart of Islam – is the cubic structure around which the faithful circumambulate during the annual pilgrimage. In *c.*605 it was destroyed by fire and flood and Pacomius was employed to reconstruct its roof from wood salvaged from the wreck of an Egyptian ship.[8] When the roof was in place, four tribes claimed the honour of completing the work by replacing the sacred Black Stone. Tempers became frayed and the Prophet was called in to arbitrate.

He ordered them to place the stone in the centre of a cloak for each tribe to carry it by the corners to its place. The Prophet then picked up the stone and placed it in its corner position. Later, when the Ka'ba was burned down during the siege of Mecca in 683, it was rebuilt by Yemeni and Persian craftsmen, but the curtain used to drape the structure (the *kiswa*) was the imported work of Coptic weavers. The *kiswa*, which is renewed annually, was traditionally woven in Egypt, although since the 1960s it has been manufactured in Mecca.

Omar's puritanism positively discouraged building activity and he kept a careful eye on what was happening in Fustat. One tradition states that he ordered Amr to take action over the construction of the second storey of a house owned by Kharidja ibn Hudhafa. Complaints had been made that the second storey threatened the privacy of the neighbours, but it is more likely that Omar's objection was concerned with architectural ostentation rather than a breach of privacy.[9] With the establishment of the Umayyad dynasty things changed dramatically during the caliphates of Abd al-Malik and al-Walid. They recognized that architecture had a powerful symbolic role in proclaiming Islam's supremacy, and their early buildings are visual manifestations of that victory in no uncertain terms. They were responsible for the two great masterpieces of early Islamic architecture, the Dome of the Rock in Jerusalem (692) and the Great Mosque at Damascus (715). Both these buildings were constructed by non-Arabs, and Copts were employed on a number of early Umayyad buildings including the Mosque of the Prophet at Medina, the palaces of Mshatta (Jordan) and Khirbet al-Mafjar (Palestine) and possibly the Dome of the Rock in Jerusalem.

Caliph al-Walid employed Copts to build the prayer hall of the Mosque of the Prophet at Medina (707–9) in which the oldest recorded *mihrab* appeared in the form of a semi-circular niche. The *mihrab* is the prayer niche from where the imam leads the prayer, and it holds an honorific function commemorating the place where the Prophet led the prayers. Whether the Copts had any influence on the design and installation of this *mihrab* is uncertain, but it raises the more general question of Coptic influence on the evolution of the *mihrab* in Islamic architecture. This may account for the design of the *mihrab* in the Dome of the Rock, which possibly predates that of Medina. It is located in the cave below the sacred rock, and its design, consisting of a flat slab decorated with a lobed arch supported by two twisted columns, resembles a Coptic funerary stele. Another early *mihrab* installed in Amr's mosque at Fustat (710) almost certainly involved the use of Coptic craftsmen. Ornamental

steles, semi-circular niches and apses were a part of the architectural vocabulary of Coptic art. They were a distinctive feature in Coptic churches, and prayer niches in monastery cells were common throughout the Middle East. Semi-circular niches, however, are not unique to Coptic art. They can be seen in Graeco-Roman architecture containing the statues of the gods; and in synagogues, such as the one at Dura Europus in Syria, they housed the scrolls of the Torah. The origin and meaning of the *mihrab* is uncertain, but the evidence of pre-Islamic architecture suggests the widespread use of the niche as a receptacle for honouring, containing and signifying something sacred.

Amr's mosque was founded in the winter of 641–2, and according to Kubiak it was built as a neighbourhood mosque (*masjid*) to serve the Ahl ar Raya quarter of Fustat, rather than to function as a congregational mosque for the whole community. Its dimensions of 50 by 30 cubits would have housed a maximum of 700 men and not 12,000, which was the estimated size of the army at that time.[10] Its construction and appearance resembled that of the original Prophet's Mosque at Medina built of mud-brick and palm trunks. It was a free-standing structure with mud-brick walls pierced by six entrances on three sides. The *qibla* wall facing Mecca was solid and continuous with no *mihrab* niche, although according to the historian Qalqashandi (d. 1418) four inserted columns marked its orientation. Palm trunks supported a roof of split palm beams covered by mud daubed fronds. There was no minaret or courtyard (*sahn*), and the floor was covered with pebbles.[11] In 673 it was enlarged to accommodate the whole Muslim population by the governor, Maslama, on the orders of Mu'awiya and corner minarets were added. These minarets were little more than towers raised slightly higher than the roof-line and they had external staircases. According to K. A. C. Creswell, this was the first recorded reference to the building of minarets, and they were probably modelled on the corner towers of the Roman *temenos* (sacred enclosure) which formed the exterior walls of the Great Mosque at Damascus.[12]

During this early period there is one revealing account of Omar's objection to the use of a *minbar* in Amr's mosque. The *minbar* is a stepped triangular pulpit from which the Friday sermon (*khutba*) is delivered. It was initially used only in congregational mosques where the *khutba* was delivered to the whole Muslim population at the Friday noon prayers. Frequently the *khutba* had a strong political as well as religious message, and it was through the *khutba* that the legitimacy of a ruler was proclaimed. As the leader of his community,

Amr frequently preached the *khutba* using a stepped wooden *minbar* which was the gift of a Nubian king. Omar disapproved of this because it elevated Amr's position in the mosque and contradicted the egalitarian spirit of collective worship. Like the *mihrab*, the origins of the *minbar* are uncertain and Robert Hillenbrand suggests a number of possibilities including Muhammad's raised chair, Coptic *ambos* (pulpits) or the portable thrones used by Sassanian generals for inspecting their troops. In its stepped form the Coptic origin is the most likely, and convincing evidence of this can be seen in a sixth/seventh-century *ambo* from the monastery of St Jeremias at Saqqara, now installed in the Coptic Museum in Cairo.[13]

Nothing of Amr's original mosque survives today, and what we see is a complex accumulation of numerous restorations. Although periodically neglected, the mosque has always held a special place in the hearts and minds of Egypt's rulers. It represents the cradle of Islam in Egypt and has always been associated with Amr and that first generation of the Prophet's Companions. A constant reminder of this is the tomb of Amr's son, Abd Allah (d. 664), situated under a dome in the eastern corner of the prayer hall. Abd Allah, who embraced Islam before his father, is venerated here, and his presence adds *baraka* (blessing) to the mosque. For these historical reasons and associations, successive rulers have made it their religious duty to extend, embellish and restore the mosque. Alterations and enlargements were carried out in 698, in 710 (when the semi-circular *mihrab* was installed), 750 and 791, but the main reconstruction, bringing the mosque to its present size, was carried out in the ninth century by Abd Allah ibn Tahir. Since then alterations have been carried out by the sultans al-Hakim (996–1021), Salah al-Din (1171–93), Baibars (1260–77), Qala'un (1280–90) and Qa'it Bay (1469–96) as well as the Turkish pasha Murad Bey in 1800. At the time of writing, major restoration work is still in progress in the prayer hall, and the north-west *riwaq* (arcaded aisle or cloister) has recently been rebuilt according to Abd Allah ibn Tahir's original ninth-century plan.

The earliest surviving parts of the mosque date from Tahir's southern extension of the prayer hall in 827. Abd Allah ibn Tahir was sent by the Caliph Ma'mun to Egypt to expel some émigré Andalusians from Alexandria. He was one of the greatest generals of his day as well as a learned and cultivated man who encouraged poetry. He governed Egypt for just two years before returning to his native Khurasan. Sections of his exterior wall can be seen extending round the southern corner of the mosque, forming the last section

of the south-west façade, and almost half of the south-east *qibla* wall extending as far as the *mihrab* salient. Recent work on the south-western corner reveals bricked-up windows with semi-circular arches flanked at the top by shell niches with colonnettes. Also dating from 827 are the deeply recessed windows with taller narrow niches on either side arranged along the exterior *qibla* wall. Nothing of any note survives from the tenth century, but we know that the interior was lavishly decorated with gilding on the capitals and *minbar*, and the traveller Muqaddasi, who visited the mosque in 985, described the presence of glass mosaic on the walls.[14] The use of gilding and mosaic in this and other early mosques was much more extensive than many surviving buildings now suggest. Today we can only gain some insight into the opulence and magnificence of early Islamic architecture by visiting the Dome of the Rock and the Great Mosques of Damascus and Cordoba.

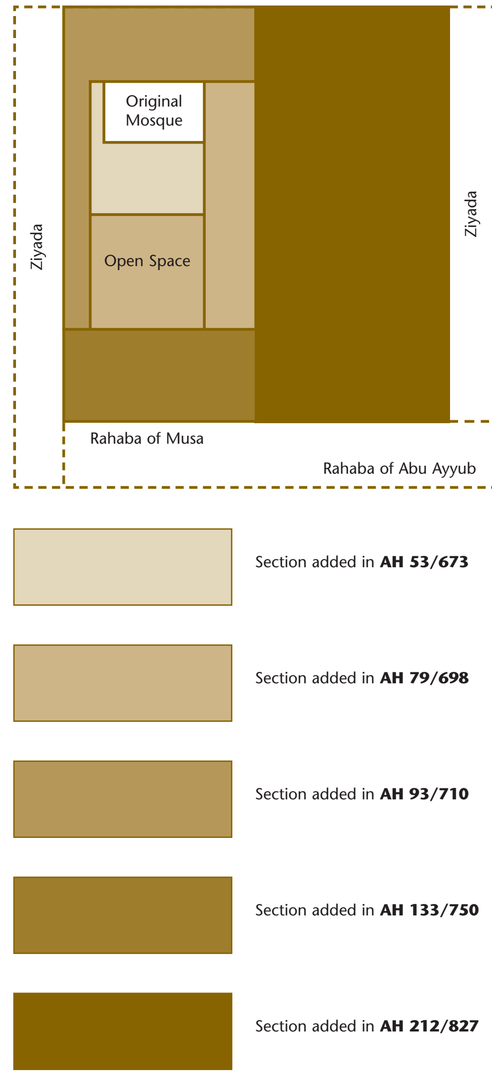
During Fatimid times the mosaics were removed and in 1016 al-Hakim rebuilt the *riwaq*s so that the mosque had, according to the historian Ibn Duqmaq (d. 1400), 'seven on the front, seven on the back, five to the east, and five to the west.'[15] He also donated a mosque lamp made of silver weighing 100,000 drachms, and according to Hillenbrand it was so big that the mosque doors had to be removed to get it in.[16] Later, in the Fatimid period, five minarets were added, but they most likely fell during the 1303 earthquake and there is no trace of them today. When Salah al-Din (Saladin) overthrew the Fatimid dynasty in 1169 the mosque was in a state of disrepair and it had suffered fire damage in the conflagration of Fustat in 1168. His repairs are recorded by the historian al-Maqrizi (1364–1442), whose description is interesting as it reveals something of the various superstructures and human presence on the roof.

> He restored the heart of the mosque, and the great *mihrab* and its marble. He inscribed his name on [the *mihrab*]. In the water tank of the hall of the *khutba* he placed a pipe to the roof-terrace. The people of the roof-terrace use it. He built a pavilion beneath the great minaret, and a water tank for it. On the northern side of the small house of Amr – running towards the west – [Salah al-Din] constructed another water pipe parallel to the roof-terrace, and a walkway allowing the people of the roof-terrace to use it. He built a water clock and it was formulated precisely.[17]

After Salah al-Din, Sultan Baibars completely rebuilt the north-west wall. Not long after this, earthquake damage in 1303 led to further repair work by the amir Salar. Much of the north-west façade visible today was rebuilt by him and he added the delicate stucco *mihrab* to the right of the western entrance. Further restoration is attributed to Qa'it Bay, and then after a period of neglect the most radical changes occurred in 1800 when Murad Bey transformed the inner plan of the mosque by rebuilding the *riwaq*s and prayer hall and adding the two minarets present today.

So far the record shows that the mosque had been in a constant state of becoming, reflecting to some extent the adaptable nature of early mosque architecture. The bewildering complexity of the interior alterations over the years makes it impossible to refer to an original plan, but despite this, today's mosque is remarkably coherent. It is of the hypostyle type (a hall of columns), with the prayer hall opening onto a *sahn* (courtyard) that is surrounded by *riwaq*s on the other three sides. As you pass through Murad Bey's entrance you enter the north-west *riwaq* which has now been reconstructed on the basis of Tahir's plan of seven transverse arcades. The whole south-western *riwaq* has been completely rebuilt since Creswell's study of the mosque in the 1930s. During the restorations of Murad Bey, the north-west *riwaq* was reduced to one aisle and the north-east and south-west *riwaq*s consisted of three and two aisles respectively. The plan and structure of the prayer hall today is essentially Murad Bey's reconstruction of 1800, and the two *mihrab*s are also from this date.

The prayer hall façade consists of twenty arches springing from piers alternating with double columns, and the interior is made up of twenty aisles perpendicular to the *qibla* wall with arcades of six arches held by tie-beams.[18] There has been little structural change in the prayer hall since the nineteenth century and a painting by Jean-Leon Gérôme, *Prayer in the Mosque of Amr* (1872), confirms this. What the picture does show, however, is the warm polychromy of the nineteenth-century interior. Then, as today, serried ranks of arches, joined by tie-beams, spring from tall impost blocks mounted on antique Corinthian columns. The arches have a slight horseshoe return, and the radiating voussoirs were painted in alternate colours of terracotta and cream. This warmth of colour was echoed in the subtle brown, brick and honey-coloured patterns of the floor. The interior today is severely monochrome and it remains to be seen if the current restorations reclaim something of the subtle colour in the original flooring.



ABOVE: The enlargements of the Mosque of Amr.



ABOVE: Mosque of Amr ibn al As: Decorated architrave with stump of broken tie-beam.

There is evidence that the arrangement of arcades in Tahir's original prayer hall was transverse rather than perpendicular (as in the style of the Great Mosque at Damascus). Projecting at right angles from the south-west wall of the prayer hall are regularly spaced wall piers supported by antique columns. Projecting out of the wall, and sandwiched between the capitals and the wall piers, are old wooden architraves. Previous photographs show that some of these displayed fragmentary stumps of tie-beams. These piers and tie-beams undoubtedly indicate the springing point of six arcades arranged parallel to the *qibla* wall. The woodwork dates from 827 and the scrollwork decoration is in the Hellenistic style. Similarly carved horizontal beams were also embedded in the brickwork and spanned the windows. Creswell compared this wood carving to the acanthus and vine-scroll decoration in the gilded architraves of the Dome of the Rock. Both mosques use a decorative vocabulary which is clearly rooted in the Hellenistic world, and earlier evidence of this tradition can be seen in Byzantine architecture – for example in the stone friezes of a number of Syrian churches such as those of St Simeon Stylites (476–91).[19] These wooden fragments are among the earliest examples of Islamic woodwork in Egypt and they demonstrate the hold of the Western Hellenistic tradition before the Tulunids imported Eastern art forms from Iraq in 868.

While the historical importance of Amr's mosque has been universally acknowledged, its aesthetic qualities have largely been ignored. It has to some extent been written off as a piecemeal accumulation of architectural elements dating mainly from the early nineteenth century. Art historical interest has been confined to retrieving its history through a complex architectural jigsaw puzzle. Its architectural merits have been overlooked in recent years because the current restoration work has made visual appraisal difficult. To some extent judgement has been postponed. Nevertheless, at the time of writing much of the work is near completion, the scaffolding is mostly clear, and the restoration of the north-west *riwaq* is finished. There is now a greater degree of balance and coherence in the plan, and those irregularities which give it life and character have been more readily absorbed into the whole. The interior has a spacious grandeur and a feeling of repose which the modest exterior ill prepares you for. It is a building which combines breadth of scale with simplicity, and it deeply impresses – not so much by its formal beauty, but by its integrity. This is partly explained by its structural honesty and unpretentiousness, but it also arises from a manifold of non-visual factors, such as the accretions of history, association, veneration, a lived-in atmosphere and workaday usage.

Its daily use in Amr's time, serving a variety of religious and secular purposes, was not unlike that of the mosque in Medina during Muhammad's ministry. The Prophet's Mosque was the seat of government, court of law, centre of learning, hospice, hospital, community centre and place of worship. Islam has never separated religious and secular life, and the architecture of Islam reflects a state of continuum between these two domains. As we shall observe, all these religious and secular activities will find architectural expression in a variety of separate and combined forms. Amr's mosque evolved as a meeting place for the whole community and was not used exclusively as a religious centre. Civil as well as religious matters were dealt with, and tribunals were held in the *ziyada* (the enclosed space immediately surrounding the mosque). Like all mosques before the introduction of the *madrasa* (theological college), it was the main centre for education,

BELOW: The fountain and *sahn* in the Mosque of Amr ibn al-As.





ABOVE: Interior, prayer hall of the Mosque of Amr

and the distinguished lawyer Shafi'i (767–820), founder of one of the four orthodox law schools of Sunni Islam (*madhahib*), taught there for many years during the eighth century.[20]

Amr's mosque also formed the nucleus of the political, administrative and commercial quarter of the city, and it must not be forgotten that it was first established to serve only the Ahl ar Raya area where the political and military aristocracy first settled. The district also included the harbour and became the commercial centre of the city with its huge markets. Amr's house was situated near the mosque, but political power devolved to the governors, who lived in their own palaces rather than occupying an official seat of government. During the Abbasid and Tulunid periods, governmental and military power was transferred to official palaces in the new suburbs of al-Askar and al-Qata'i, but the aristocracy still kept their residencies in the Ahl ar Raya district. The area became increasingly cosmopolitan as foreigners settled and invested in both trade and property. The ruling Umayyad dynasty, including Mu'awiya and his sons and daughters, owned property there, although they never permanently settled. It was during the reign of Mu'awiya that building activity accelerated and soon the quarter acquired an estimated 500 houses, including 100 villas and palaces.[21]

After Omar's death there were no qualms about building houses of more than one storey. Most had two, and the plans followed the introverted tradition of the Mediterranean, with rooms grouped around an inner courtyard. Some may even have had more than two storeys, reflecting the taller architectural traditions of southern Arabia. However, local building styles and methods generally prevailed because the builders were mainly Copts, familiar with the traditional unbaked mud-brick or pisé (a compound of kneaded mud and gravel rammed into shuttering). Recent archaeological evidence shows that other materials were also used, including stone and fired brick. Marble columns were occasionally used, and there was one example of a house incorporating recycled columns from Alexandria. Design features which have endured in domestic architecture for centuries were well established, such as the segregation of public and private domains, and the development of the *madjlis* (reception room) and *maq'ad*s (loggias on the second storey). The larger houses and palaces had private mosques and their own wells and water supplies servicing bath-houses. One of the most imposing palaces was that of Dar al-Mudhahhaba, the so called Gilded House, because of its golden dome. Besides houses, other public buildings included numerous baths and covered markets.[22]

Al-Qata'i

With the fall of the Umayyad dynasty in 750, the political centre of Islam moved from Damascus to Baghdad, and Egypt came under the rule of the Abbasid caliphate. The new regime of governors left Fustat and established a new centre of government in the suburb of al-Askar to the north-east. The site had formerly been the district of al-Hamra al-Quswa but it developed as a military encampment for the Abbasid army and became known as Medinet al-Askar, 'the city of the cantonment or camp'. Here they established their military headquarters and for the first time built a palace complex as the official seat of government. They also built a palace known as the Dome of the Air on a spur of the Muqattam hills, the site now occupied by the Cairo Citadel. The average tenure of the Abbasid governors was less than two years, and according to Lane-Poole there was a total of 67 of them in 118 years.[23] Egypt evolved into a fiefdom and it became customary for the fief-holders to send deputies, or governors, to represent them and rule on their behalf. Most fief-holders were members of the Abbasid family or powerful Turkish commanders. After 856, Turkish governors became the norm, and with the exception of the Arab Fatimid dynasty, throughout much of its history the dominant ruling class of Egypt has been Turkish.

The gradual rise of Turkish power and influence in the Muslim world began with the conscription of Turkish slave troops into the Abbasid army during the reign of the eighth caliph, al-Mu'tasim (833–42). Previously the Abbasids had relied on the support of Persian soldiers from Khurasan, and many of their most distinguished commanders, like Abd Allah ibn Tahir, came from that region. These made up the bulk of the imperial bodyguard, which was the nearest thing to a regular army. The rest of the army consisted of Mudarite and Yemenite Arab volunteers taken from the north and south of Arabia, as well as other sundry Arab units. The death of Caliph Harun al-Rashid in 809 caused a war of succession between his sons, al-Amin and al-Ma'mun, and this led to divided loyalties between the Arab forces as well as mistrust of the Persian bodyguard, which was known for its Shi'ite sympathies. For these reasons the Abbasid caliphs relied increasingly on the loyalty of Turkish slave troops who gradually replaced the Persians as the imperial bodyguard. During the reign of al-Ma'mun the number of Turkish troops was estimated at 70,000. Turkish slaves were recruited, not just for the armed forces, but for senior administrative positions in the empire where loyalty was also a valued commodity. Slavery thus created a form of meritocracy in which

able people rose through a rigorous education and training to achieve the highest offices of state.

Such a personality was Ahmad ibn Tulun (835–84), who restored Egypt's independence, making it the centre of an empire, and giving it a status it had not enjoyed since Pharaonic times. He also changed the face of art and architecture in Egypt. He was educated in Baghdad and Tarsus where he studied the Qur'an, Arabic, theology and jurisprudence, before undergoing extensive military training in the new Abbasid capital of Samarra. He rose in rank and flourished in the court there, and the atmosphere and cultural environment of that city left an indelible mark on him. This new capital was founded by the caliph al-Mu'tasim in 836 because Baghdad had become ungovernable due to the religious conflict between Sunni and Shi'ite Muslims, and the unruly behaviour of Turkish troops. Samarra, situated 96 kilometres north of Baghdad, was the capital for just less than sixty years but it was here that Islamic architecture came of age. It became the centre of an immense building programme and al-Mu'tasim brought in builders from all over the empire, including Egypt, where a number of churches were plundered to provide marble and columns. Renowned for its spiral minaret, the largest mosque in the Muslim world was built there by the caliph al-Mutawakkil in 852, and the city became famous for the number and extravagance of its palaces. Little of this architectural splendour remains today; of the palaces, only a few fragments remain above ground, and all that is left of the great mosque is the spiral minaret and its exterior walls. Samarra was also possibly a centre for the manufacture of lustre pottery and other luxuries. Its artistic importance cannot be underestimated and it is against this background that Ibn Tulun's subsequent contribution to the art and architecture of Egypt must be seen and understood.

In 868, at the age of thirty-three, Ibn Tulun was appointed to govern Egypt as a deputy on behalf of his stepfather, Bayakbak. Initially his jurisdiction and powers were limited, and he had little control over finance and communications which were in the hands of his rival, al-Mudabbir. After four years, al-Mudabbir was transferred to Syria, and Ibn Tulun was free to extend and consolidate his power in Egypt, as well as to build up a formidable army of Turkish, Sudanese and Greek slave troops. After the death of Bayakbak, the fiefdom of Egypt was passed to Ibn Tulun's father-in-law, Yarjukh, and on his death it went in turn to the caliph's son Ja'afar al-Mufawwad. Under each of these fief-holders Ibn Tulun was confirmed and strengthened in his office. When the caliph al-Mu'tamid came to the

throne in 870 he divided the empire, giving authority over the west to his son al-Mufawwad, and the east to his brother al-Muwaffaq. This division led to a power struggle between the two, and Ibn Tulun exploited the situation by withholding revenues to Baghdad, thus increasing the wealth, power and independence of Egypt. The lack of revenue from Egypt eventually prompted al-Muwaffaq to attempt to remove Ibn Tulun from office and he sent the imperial army against him. The army, however, backed off when it encountered Egypt's strong defences, and shortly afterwards, Ibn Tulun, capitalizing on al-Muwaffaq's weakness, invaded Syria. Egypt had not just established her independence – she had annexed Abbasid territory.[24]

Soon after he arrived in Egypt in 870, Ibn Tulun moved the seat of government from al-Askar to the suburb of al-Qata'i north-west of Fustat. Here, at the foot of the present Citadel, under the Dome of the Air, he created a new urban development inspired by Samarra. It covered over 1.6 square kilometres and included a mosque, government buildings and a palace complex adjoining a hippodrome. The palace consisted of a number of buildings, including a separate harem, extensive gardens and a menagerie. The palace and hippodrome were jointly known as al-Maydan, and this formed the recreational centre of the city where military parades, horse races and polo matches were held. The Maydan was entered by several gates serving different classes of society with a triple gate, the Bab al-Maydan, reserved for the military. The army would enter through its outer arches, leaving the central arch vacant for Ibn Tulun to ride through on horseback. Other gates were known as the Gate of the Nobles, the Gate of the Harem, the Gate of al-Darmun, the Sag Gate, and the Gate of the Lions, which was surmounted by a gallery and two stucco lions. The city also had a hospital, numerous markets and bathhouses serviced by the Aqueduct of Basatin which brought water from a spring in the southern desert.

The Aqueduct of Basatin was built by a Copt, and it formed one of a number of Ibn Tulun's hydraulic engineering projects, including the dredging of Alexandria's canal and repairs to the Nilometer at Rawdah Island. The Nilometer is an Abbasid structure which was commissioned by the caliph al-Mutawakkil and built by Ahmad ibn Muhammad al-Hasib in 862. It is the earliest surviving Islamic monument in Egypt and is one of Cairo's finest structures, exemplifying in the most disciplined terms the architectural principle of fitness of purpose. The Nilometer measured the height of the Nile waters during the annual inundation and its measurements were essential in determining irrigation policy. It is a stone





ABOVE & ABOVE RIGHT: The Nilometer.

lined pit, circular at the bottom and rectangular at the top, from which three lateral tunnels, at different levels, connect with the Nile from the east side. Twenty-four steps lead down to a landing which faces four recessed arches. These pointed arches, framed with colonnettes, are identical in form to those used by Gothic architects three centuries later.[25] At the centre of the pit is a marble octagonal measuring column with a composite capital held at the top by a timber beam and secured at the bottom in a granite millstone. The whole unit is covered by a modern wooden dome. The measuring column is divided into nineteen cubits, with the sixteenth cubit mark representing the ideal flood level. Between 872 and 873 Ibn Tulun restored the Nilometer and removed Caliph al-Mutawakkil's name from a band of Kufic inscription, a gesture which no doubt signified his desire to disassociate himself and Egypt from the Abbasid caliphate.

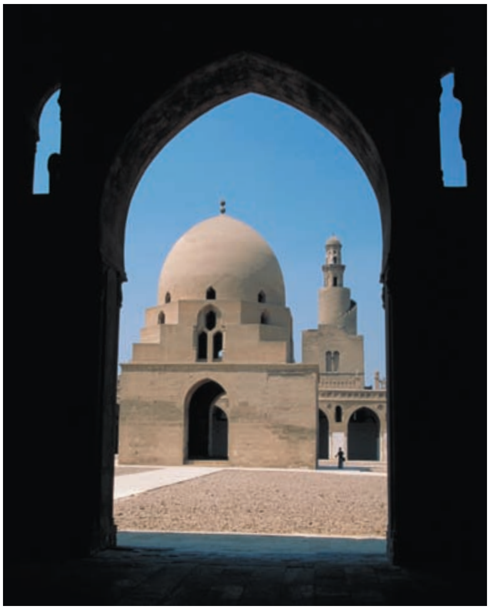
According to the tenth-century historian al-Balawi, the Copt who built the Aqueduct of Basatin also designed Ibn Tulun's great mosque.[26] He tells a story of how Ibn Tulun was dissatisfied with the aqueduct and threw the Coptic engineer into prison. The Copt was later released when his advice was sought on how to build a mosque without the use of columns. It was estimated that at least 300 columns would be needed for the new congregational mosque. The acquisition of so many columns would almost certainly have involved plundering Christian churches because it was the custom

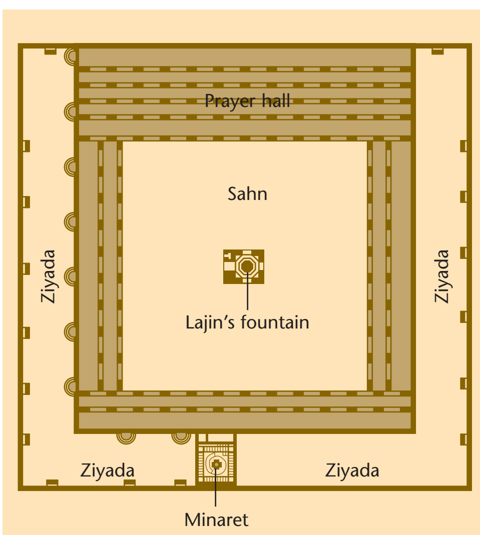


in those days to recycle and use existing antique columns. It was therefore preferable to avoid such action, so the story goes that the Copt offered his services as architect and suggested the use of brick piers as an alternative to columns. Such a story is extremely unlikely, although it might have a grain of truth. Copts were almost certainly involved in the construction of the mosque and they no doubt offered technical advice, but the design, concept and detail of the mosque is entirely Islamic. It was essentially a Samarran import, involving many Iraqi builders and craftsmen, and it is unlikely that a Christian architect was in the forefront of the design process.



TOP & ABOVE: The Ibn Tulun mosque.





TOP: The Ibn Tulun mosque.

ABOVE: Plan of the Ibn Tulun mosque.

Ibn Tulun's mosque, built between 876 and 896, is an architectural masterpiece. It is the largest, oldest, and in terms of grandeur, dignity and monumental simplicity, the finest in Egypt. In contrast to Amr's mosque it is remarkably well preserved, and with the exception of thirteenth-century restoration work, it retains the integrity and coherence of its original design. Its minaret is built of stone, but the bulk of the mosque is made of red brick faced with stucco, materials which distinguish it from most other mosques in Cairo. The use of brick piers rather than columns to support the arcades was not the result of Coptic influence, but a characteristic feature of Samarran architecture. Brick and stucco are the building materials of Mesopotamia and have ancient pre-Islamic roots. It is a hypostyle mosque with a *sahn* surrounded by four *riwaq*s, five aisles deep on the *qibla* side and two aisles deep on each of the other three sides. The *sahn* is square with an arcade of thirteen pointed arches on each of the four sides, and the arcades of the prayer hall are made up of seventeen arches that run parallel to the *qibla* wall. The central *mihrab* aisle in the prayer hall is identical to the others, and the exterior façade is a continuous arcade with no distinguishing features such as a larger central aisle, dome or *pishtaq* (a lofty screen framing an arch or portal).

The mosque is surrounded by an outer perimeter wall creating an enclosure known as a *ziyada*, which isolated the mosque from the noise of everyday life. This is also a feature of the Samarran mosques, but Creswell suggests it may have more ancient origins in the Roman *temenos* (a wall containing a sacred enclosure). In Hellenistic times the streets of cities terminated at the gates of the *temenos*, and Creswell has suggested that in similar fashion the ninth-century streets of Cairo probably converged on the doors of the *ziyada*.[27] Today the space around the imposing walls of the *ziyada* is clear, but originally the mosque was in a crowded urban centre. The deep canyon of space trapped between the imposing walls of the mosque and the *ziyada* produces an exaggerated depth and scale to the architectural perspective of this area, making it a worthy prelude to the immense space of the *sahn*. There were washing facilities in the *ziyada*, and the original fountain in the centre of the *sahn*, with its gilded dome, marble columns and basin, served a purely ornamental role. The present fountain is the work of Sultan Lajin and dates from the thirteenth century.

The stone minaret stands slightly off centre between the north-west wall of the mosque and the *ziyada* wall. It is a four-storeyed structure with a square base and external staircase, winding

in an anti-clockwise direction up to a cylindrical tower surmounted by two octagonal shafts, one above the other, capped by a small ribbed dome and separated by a balcony. It begins with a square plan and spirals into the cylinder, and its stylistic roots can be seen in the helicoidal minarets at Samarra and Abu Dulaf in Iraq. These minarets in their turn have their origin in pre-Islamic architecture, in the fire towers and ziggurats of ancient Mesopotamia. In the eleventh and twelfth centuries contemporary writers commented on the similarity between Ibn Tulun's minaret and that at Samarra. One contemporary explanation for the spiral form of Ibn Tulun's minaret can be found in the writings of the historians Ibn Duqmaq, al-Maqrizi and Ya'qubi. According to them, Ibn Tulun made a spiral by twisting a piece of paper around his finger and ordered his architects to build a minaret likewise.[28] The story may be true, but it suggests a certain spontaneity and invention on his part which might not have been the case. It is more likely that he was explaining and demonstrating an architectural form in Samarra with which he was already familiar.

The minaret we see today is not the spiral shape suggested in these earlier descriptions and it carries only a lingering echo of Samarra. It has obviously undergone significant changes and the big question is how many. Is the present structure original or a mixture of several restorations? The restoration work and embellishments of Sultan Lajin are well documented but the extent of his work on the minaret is contentious. He took sanctuary in the abandoned mosque of Ibn Tulun in 1296, following his assassination of Sultan al-Ashraf Khalil, and vowed that if he survived to take the throne he would restore the mosque. He did survive, became sultan the following year, and made good his promise by substantially restoring the mosque. The sections of the mosque attributed to Lajin are the *sahn* fountain, the octagonal shafts of the minaret, the *minbar* and repairs to the *mihrab*. On stylistic grounds it is clear that these are thirteenth century, but the date of the infrastructure of the minaret is not so obvious. It has been argued that because the minaret is built of stone rather than brick (like the rest of the mosque), the whole structure is a complete thirteenth-century reconstruction. Earlier sources, however, like al-Maqrizi (1364–1442), state quite clearly that the original minaret was built of stone.

Creswell originally thought that the minaret was a mixture of work by Ibn Tulun and restoration by Lajin. However, when the technical consistency of the underlying stonework was revealed in 1920, he became convinced that the work was entirely by Lajin,[29]



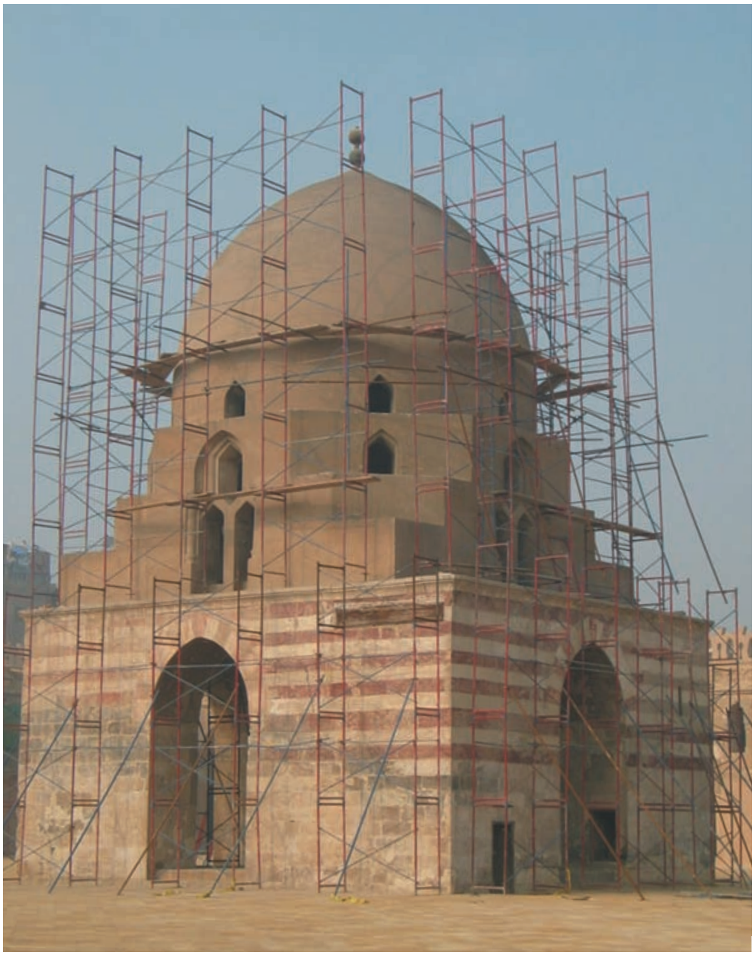
ABOVE: The minaret of the Ibn Tulun mosque.

although there are stylistic grounds for questioning this. If Lajin had rebuilt the whole minaret from scratch, why did he build only the top shafts in the contemporary Mamluk style and not the infrastructure? This is inconsistent with the fountain, which is a unified Mamluk design. Also, as Doris Behrens-Abouseif has pointed out, if this was a total reconstruction there would have been some commemorative inscription.[30] The original minaret would have been a free-standing structure like the Samarran minarets, but here it is connected to the north-west wall of the mosque by an arched bridge which clumsily blocks up one of the mosque windows. This was obviously not a part of the original design. It also destroys the free-standing unity of conception which the minaret would still retain were it not for the bridge. In the organization of the masses the first two storeys still owe something to Samarra, but the corbels, arches, Andalusian horseshoe windows and octagonal shafts look like piecemeal additions. The most recent explanation for these irregularities has been offered by M. Tarek Swelim, who suggests that the rectangular base with its horseshoe windows was probably built during the Ayyubid period with the assistance of builders from the Maghrib (western Muslim world). He argues that the Maghribi community, who settled in the mosque during the reign of Salah al-Din, may account for the distinctive blind Andalusian horseshoe windows. Swelim concludes that the design of the cylindrical shaft was maintained as an acknowledgement of the minaret's original shape and the octagonal shafts were thirteenth-century additions (but points out that there is no proof that they were the work of Lajin).[31]

Lajin's fountain replaced an ornamental fountain known as the *fauwara*, which was burnt down in 986. Ibn Duqmaq's description of it is as follows:

> The *fauwara* was in the middle of the *sahn*, and over it was a gilt dome on ten marble columns, and round it were 16 marble columns with a marble pavement. And under the dome was a great basin of marble 4 cubits in diameter with a jet of marble in the centre ... and on the roof was a sundial. The roof had a railing around it of teakwood.[32]

The fountain we see today is essentially a domed cube with four pointed arched openings on each side. It is square in plan on the inside, but the thicker north-east wall, containing a staircase, pushes the exterior plan nearer to being a rectangle, breaking the symmetry



LEFT: Central fountain in the Mosque of Ibn Tulun.

on the north-west and south-east sides. The plain stone cubic interior encloses an octagonal basin, and above this five tiers of crystalline stalactite niches (*muqarnas*) form the squinches and zone of transition that support the pointed dome. This zone is pierced on the four sides by tall pointed windows with three lights, and smaller windows above repeat the shapes of the *muqarnas* at regular intervals, admitting shafts of light into the interior. On the outside the zone of transition is strongly marked by stepped corners leading to the smooth pointed dome crowned with a finial. Although Mamluk in style, it sits well in its ninth-century setting due to its fine proportion and clarity of form.

Simplicity and strength of form is what characterizes the mosque's ninth-century structure. It is carried through the ranks of pointed arcades in the *riwaq*s and prayer hall with a perfectly proportioned balance between solid and void. The masses are relieved and articulated by the selective use of stucco decoration. In the arcades





ABOVE: Piers in the prayer hall of Ibn Tulun's mosque.

ABOVE RIGHT: Capital of colonnette.

facing the *sahn*, each brick pier, like those at Samarra, has an engaged colonnette in each corner. The capitals of these colonnettes consist of vine-leaf motifs which also form the scrollwork in the delicate band of stucco ornament framing the face of each arch, and forming an articulating band around the top of each pier above the capitals. The solid mass of the arcades is further relieved where the spandrels of each arch are pierced by a window framed with colonnettes. These are flanked by rosettes or square panels with reticulated patterns. Beneath the cornice, sandwiched between two horizontal mouldings, a string course of octagonally framed rosettes provides a continuous frieze around the top of the *sahn* arcading. A corresponding frieze of circles set within recessed squares can be found on the exterior walls under the parapet where a striking band of crenellation lines the perimeter walls with merlons like serried ranks of soldiers standing arm in arm and shoulder to shoulder. All four walls of the mosque are pierced by over 120 pointed arched windows containing delicate filigree grilles from many periods. The style of these windows is very close to those in Amr's mosque (of Tahir's reconstruction in 827), although Creswell identified only four as original, noting their similarity to the compasswork design in the windows at the Great Mosque at Damascus.

The stucco decoration in the mosque is significant because it represents something of a milestone in Islamic art, suggesting a new grammar of ornament that extends well beyond the confines of architecture. Like the broader architectural masses, the detail is an import from Samarra. Stucco is a form of plasterwork using an aggregate of

plaster with cement or concrete. It was extensively used in pre-Islamic Parthian and Sassanian architecture in Persia and Iraq. As a medium, it was valued for its flexibility and ease of manipulation. It was ideal for quickly covering surfaces, such as coarse brickwork, with fine decoration. This facility for spreading ornamentation over large areas has a long tradition in the Eastern world, and it may well account for the subordination of form to surface decoration in later Islamic architecture. No traces of stucco have survived in the mosques of Samarra, but significant amounts have been excavated in the ruined palaces there at Balkuwara and Jausaq al-Khaqani. The remains of these palaces are fragmentary, and with the exception of Balkuwara, hardly any of the stucco ornamentation exists *in situ*. The importance of the Ibn Tulun mosque is that the stucco is *in situ* and it is here that we can best evaluate the decorative innovations begun at Samarra.

The ornament at Samarra was originally excavated and classified by Ernst Herzfeld, and both he and Creswell divided it broadly into three styles while acknowledging that there were areas of overlap. There was insufficient archaeological evidence to determine a chronology of style and all three coexisted throughout the period. The patterns generally represent a new synthesis of motifs well established in Hellenistic, Byzantine, Sassanian and Umayyad art. These involve variations on the theme of the vine, with leaves, grapes and stalks as well as other motifs such as palmettes, rosettes and cornucopia. Style A is probably closer to the Western tradition with a more naturalistic treatment of the vine. Vine leaves are represented with five stylized lobes, inscribed veins and drilled holes or 'eyes' regularly spaced between the lobes. These leaves are organically bound by stalks, and they scroll along borders, or roll up tightly into six lobed panels with beaded frames. Other configurations show leaves alternating with bunches of grapes in hexagonal panels. The decoration is densely packed and deeply incised, so that the principal motifs, the vine leaves and grapes, are revealed in sharp relief.

Style B shows a greater equilibrium between figure and ground. Unlike style A, where the vine leaves and grapes dominate the ornamental background, the principal motifs of style B are less differentiated and more integrated into the two-dimensional surface. Although based on leaves and palmettes, the motifs are more abstracted, and there is less of a flourish as there are no stems to organically link the forms. They are more densely organized into the surface geometry of polylobes, polygons, squares and rectangles. In this respect we are witnessing the genesis of the Islamic arabesque. Style C is less rich and dense but more radically abstract with

open-ended symmetrical repeat patterns covering large surfaces. In contrast to the drilled beading and deeply incised carving of style A, the surface relief of style C is undulating, shallow and bevelled. It involved a technique of casting the stucco from baked clay moulds so that the results could be assembled and installed with great speed. The motifs are very ambiguous, suggesting vases, bottles, spear heads, volutes, palmettes, crests, leaves and birds. Unlike styles A and B, the motifs are not framed in discrete compartments and the elements cannot be so easily separated between figure and ground or positive and negative. The figure becomes the ground and vice versa.





ABOVE & ABOVE RIGHT: Stucco decoration in the soffits of the arches in the Ibn Tulun mosque.

The stucco decoration in the Ibn Tulun mosque, most noticeably in the soffits of the arches facing the *sahn*, relates to Samarra style B. Familiar vegetal motifs including the vine leaf, acanthus, palmettes, rosettes, stalks and cornucopia appear in new combinations and ambiguous guises. Set between narrow borders, they densely fill the interstices of various geometric networks based on interlacing circles, equilateral triangles and squares. They fill circles, squares, rectangles, polygons and polylobes, and the geometrical forms regulate the pattern in a variety of ways – on a vertical and horizontal axis, or set in patterns of 45 or 60 degrees. Some panels are tight, concentrated and angular, while others, based on interlacing circles, are more open and dynamic with a serpentine flourish. The patterns are incised and drilled into one smooth plane and there is a remarkable resolution between the opposing elements of

organic and geometrical form. The resulting symbiosis produces a rich and varied tapestry of pattern.

Geometrical forms act as a trellis supporting the design, but they are never closed, crystallized or static. They are dynamic, infinite and open-ended and rarely find a point of rest or termination. In this respect fundamental differences emerge between the uses of geometrical shapes in Islamic and Western art. In Islamic art they are dynamic and infinite, whereas the Western tradition, based on classical Graeco-Roman art, is closed and tends towards the finite and static. In Islamic art, floral and vegetal arabesques are stylized and two-dimensional, respecting the flat plane of the surface, whereas Hellenistic art gravitates towards naturalism. As the nineteenth-century designer Owen Jones pointed out in his book *The Grammar of Ornament*, the flowers and leaves of Greek scrollwork grow out of the surface while Islamic design works dynamically with it.[33] Owen Jones wrote his book in order to improve British design thinking in 1856, and he devoted a whole page in his chapter on Arabian ornament to the mosque of Ibn Tulun. He believed the West could learn from Islamic art and maintained that Ibn Tulun marked a critical stage in the evolution of Islamic decorative art that reached its peak in the Moorish art of the Alhambra Palace in Granada.

The architecture and decoration of the mosque of Ibn Tulun undoubtedly represents a landmark in the evolution of Islamic design but its immediate influence was somewhat limited. Stucco was the principal medium for decoration in the mosque, and Samarra style B dominates (only fragments of woodwork in the door soffits derive from style C). However, it was style C that emerged as the most enduring and widespread influence across the decorative arts in Egypt during this period. Fragments of stucco now displayed in the Museum of Islamic Art, Cairo, clearly show the influence of style C on the domestic architecture of Fustat, but more significantly, it proved a more suitable vehicle for the decorative arts, where its tight organization of ambiguous pattern provided a distinctive form of surface decoration for pottery, rock crystal and woodwork. It was a style that endured well into the Ikhshidid and Fatimid eras and its distinctive bevelled patterns can be seen more than a century later in the tie-beams and doors of the mosque of al-Hakim (990–1003), where something of a Tulunid revival can also be seen in the piers, arcades and monumental grandeur.

Ibn Tulun died in May 884 before his dispute with al-Muwaffaq could be resolved. His twenty-year-old son, Khumarawaih, was proclaimed successor, but his authority was not recognized in

Samarra, and he was soon obliged to go to war in order to sustain Egypt's independence. Khumarawaih's hold on Syria was immediately challenged by an alliance between the governors of Mosul, Anbar and Damascus, and he was forced to meet their opposition near Ramla in Palestine where he led 70,000 men into battle. In the heat of the fighting he fled in panic, but the reserve of his army held its ground, and against all the odds achieved a remarkable victory before going on to take Damascus. A year later, Khumarawaih redeemed his reputation as a leader when his former general Sa'd el A'sar rebelled in Damascus. Wasting no time, Khumarawaih marched on Damascus, defeated Sa'd el A'sar and then invaded Iraq, capturing Mosul. His personal courage on this campaign won the respect of his men and his occupation of northern Iraq secured a peace treaty with the caliph. In 886 al-Muwaffaq concluded an agreement which guaranteed Khumarawaih and his descendants the governance of Egypt, Syria, Cilicia and parts of northern Iraq for the next thirty years. In 896 the treaty was reaffirmed when the new caliph, al-Muta'did, now ruling from Baghdad, took Khumarawaih's daughter in marriage.

The marriage was an extravagant and indulgent affair and the estimated cost to Khumarawaih was a million dinars. It mirrored his extravagance elsewhere, particularly in the field of architecture, where his new palace became the stuff of legend. According to al-Maqrizi:

> He enlarged the palace and turned the Maydan into a garden, which he planted with rare trees and exquisite roses. The stems of the trees were thought unsightly and he coated them with sheets of copper gilt, between which and the trunk leaden pipes supplied water, not only to the trees, but to the canals and fountains that irrigated the garden by means of water wheels. There were beds of basil carefully cut out to formal patterns, red, blue and yellow water lilies and gillyflowers, exotic plants from all countries, apricots grafted upon almond trees, and various horticultural experiments. A pigeon tower in the midst was stocked with turtle doves, wood pigeons, and all sorts of birds with rich plumage or sweet song, who made a cheerful concert as they perched on the ladders set against the walls or skimmed over the pond and rivulets. In the palace he adorned the walls of his 'Golden House' with gold and ultramarine, and there set up his statue and

> that of his wives in heroic size, admirably carved in wood, and painted and dressed to the life with gold crowns and jewelled ears and turbans. In front of the palace he laid out a lake of quicksilver, by the advice of his physician who recommended it as a cure for insomnia. It was 50 cubits each way and cost immense sums. Here the prince lay on an airbed, linked by silk cords to silver columns at the margin, and as he rocked and courted sleep his blue eyed lion Zureyk faithfully guarded his master.[34]

For centuries, such lavish descriptions have kindled the imagination and nurtured the mystique of the Muslim court and its palace architecture. It was the kind of hyperbole that inspired the *Arabian Nights* and it is worth noting that many of those magical stories originated in Cairo. Such fantasies should not be dryly dismissed, because they are a part of the mythology of the court, and to some extent they determined the expectation and extravagance of later palace architecture. It is a culture that provides the imaginative context and imagery permeating the other visual arts; it explains the dancers, musicians, hunters, falconers, knights, heraldic beasts and enthroned potentates who adorn all manner of luxuries. Poetry and panegyric literature become a defining aspect of later Muslim palaces such as the Alhambra in Granada. To borrow Heinrich Klotz's phrase, it is often a case of architectural form following fiction rather than function.

Khumarawaih's extravagant lifestyle caught up with him, and as a consequence of a harem intrigue, he was murdered by his slaves on a visit to Damascus in 896. He was succeeded by his degenerate fourteen-year-old son, Abu'l 'Askar Jaysh, who was assassinated after a brutal reign lasting just a few months. Thereafter the Tulunid dynasty went into a spiral of rapid decline. Syria fell into a state of turmoil, ravaged by an insurrection of the Qarmati sect (a splinter group of the Isma'ilis). This gave the caliph a pretext to intervene and he sent the imperial army to Syria where he put down the Qarmati rebellion. His forces then attacked Egypt by land and sea and they finally captured Fustat in 905. The caliph's general, Muhammad ibn Suleyman, allowed his army to go on the rampage, and with the exception of Ibn Tulun's mosque, the city of al-Qata'i with all its sumptuous palaces was completely destroyed. Egypt was now brought to heel and returned to Abbasid rule, and for the next thirty years she went through an unsettled period of decline under a succession of weak Turkish military governors.

Chapter Two

Fatimid Architecture

With the rise of the Fatimid empire in North Africa (909), the government of Baghdad began to realize that Egypt's weakness was not in its interests. It needed a strong bulwark against the Fatimid threat, and accepted that in order to achieve this Egypt needed a degree of autonomy under a strong ruler. In 935 the country was rescued from a state of anarchy with the appointment of Muhammad ibn Tughj as governor. He was given the title of Ikhshid (an Iranian word meaning ruler) and ruled for eleven years, keeping the Fatimids in check and holding on to Egypt's remaining possessions in central and southern Syria. He had the support of Baghdad, although the Abbasid empire was in a fragmented state and the caliph had little authority over the many break-away provinces which now enjoyed some autonomy. When the Ikhshid died he was succeeded by his two sons and the title passed to the eldest, who was fourteen. Neither of the sons exercised any power because the reins of government were immediately snatched by their tutor, a Nubian slave called Abu'l Misk Kafur. He ruled for nineteen years, maintaining the policies of his predecessor, but when he died in 968 Ahmed (a child of eleven), the younger son of the Ikhshid, was elected successor. This succession unleashed a squabble for power among a clique of ambitious but incompetent ministers, and the turmoil they created opened the door to the Fatimid conquest of Egypt in 969.[1]

The Fatimids were Shi'ite Muslims of the Isma'ili sect and their leaders claimed descent from the Prophet through his daughter Fatima and her husband Ali, hence the name Fatimid. The Shi'ites are regarded by Sunni Muslims as heterodox, but they represent a

significant and legitimate minority in the Muslim world and most fall into two main groups, the Twelvers and Isma'ilis (Severners). After the death of the Prophet, the Shi'ites refused to accept the election of Abu Bakr as caliph, and they insisted that the succession should go to Ali. They rejected the pragmatic and political reasons for Abu Bakr's election and argued the necessity for a spiritual caliphate that only a member of the Prophet's family could provide. It was their belief that Ali and his descendants (the imams) would inherit the religious authority and divine wisdom of the Prophet. In so doing, they initiated a belief in divine leadership. The Isma'ilis believe that Isma'il, the elder son of the sixth imam, Jafar al-Sadiq, did not die but went into a state of concealment and would reappear as a divine leader, the Mahdi, thereafter ruling the world in a state of peace and justice. Meanwhile, as his re-emergence is awaited, the light of divine wisdom and leadership is carried by his descendants, the holy imams. Between Isma'il and Abd Allah al-Mahdi, the first Fatimid caliph, the imamate was administered by the concealed imams.

The Fatimid dynasty of Egypt differed fundamentally from its political predecessors by initiating a religious movement. This dynasty was the centre of a mission which spawned an empire that almost overthrew the Abbasid caliphate. The movement began in Salamiyya in Syria, with Abd Allah al-Akbar, an eighth generation descendant of the Prophet. He began a mission in his home town of Aska Mukrum (near Ahwaz on the Persian Gulf) but was forced to flee to Syria where he settled in Salamiyya, became a successful merchant and engaged in undercover missionary activity. He sent missionaries (*da'i*/*du'at*, singular/plural) to Iraq, and his successors, Ahmed, al-Husain and Abu'l Shalaghlagh, extended the ministry to Algeria, Aden, Persia and Sind. In 899, Abd Allah's great grandson, Sa'id ibn al-Husain, became *da'i* leader, and he subsequently became known as Abd Allah al-Mahdi, the founder of the Fatimid dynasty. Soon after he became *da'i* leader in Salamiyya, a faction in Iraq, led by Hamdan Qarmat, refused to recognize his leadership and broke away from the Fatimid mainstream. They became the Qarmati sect, or Carmathians, and it was their insurrection in Syria that precipitated the downfall of the Tulunids.

The religious campaign so far had been a successful undercover operation, but when al-Mahdi's supporters in Syria revealed his whereabouts, he was obliged to leave Salamiyya, travel west and take refuge with his son in the oasis of Sijilmasa in Morocco. This was a busy trading centre, and like his great-grandfather he conducted his ministry incognito with the identity of a merchant. His closest contact

during this period was Abu Abd Allah al-Shi'i, a brilliant propagandist who had won the support of a number of Berber tribes. Al-Shi'i was a militant who successfully led the Kutama Berbers in a guerrilla war that eventually ousted the ruling Aghlabid dynasty from Tunisia. When he had successfully consolidated his power in Tunisia and eastern Algeria, al-Shi'i invited al-Mahdi to accept his destiny and assume the authority of imam-caliph. The Tunisian capital, Qairawan, proved unsuitable for the new regime because it was a stronghold of Sunni orthodoxy, so after a brief residency at the royal city of Raqqada, a new capital, Mahdiya, was established on the coast. The empire of al-Mahdi, who ruled from 909 to 934, included Sicily, and extended across North Africa from the Atlantic coast of Morocco to Libya.[2]

Mahdiya was built on a rocky peninsula, fortified by a continuous sea wall with access to the city through a monumental gate. In 916 the great mosque was built and this broadly follows the plan of the great congregational mosque of Qairawan. It has a fortified aspect with a long, solid, low-slung façade flanked by cubic corner towers and relieved at the centre by an imposing portal which projects like a triumphal arch. The portal is pierced with a horseshoe arch flanked by two tiers of tall narrow blind arches. The *sahn* is surrounded by four *riwaq*s, each with a single aisle, and the prayer hall has nine aisles, three bays deep, perpendicular to the *qibla* wall. The projecting portal and the blind niches decorating the prayer hall façade are Fatimid innovations which appear later in the architecture of Cairo. Another architectural design anticipating later developments in Cairo is the city of Mansuriyya, built between 948 and 972. This city was built by the Imam al-Mansur following his victory over the Kharijite rebels. They destroyed the city of Raqqada, and Mansuriyya was built from material salvaged from its ruins. Its circular plan was based on the city of Baghdad, but the arrangement of its gates and palaces anticipates the planning of al-Qahira (Fatimid Cairo). Like Cairo it had a mosque called al-Azhar, named after the Prophet's daughter, Fatima al-Azhar ('Fatima the Radiant'), and the names of some of the gates are the same – Bab al-Futuh (Gate of Conquest) and Bab Zuwaila, named after the African troops.

The conquest of Egypt was secured by the fourth Fatimid caliph, al-Mu'izz (952–75), who was an able statesman and a man of considerable learning. He was assisted in his conquest by a brilliant general, Jawhar al-Siqilli, and a Jewish convert, Yaqub ibn Killis, who was formerly a high ranking official under the previous Ikhshidid regime. Ibn Killis's financial acumen and his inside

knowledge of Egypt, both before and after the conquest, proved invaluable to the new regime. It was Jawhar who began to build the walls of the new city of al-Qahira (from whence Cairo gets its name), which was originally named al-Mansuriyya after his father's city. It was built to the north of al-Qata'i and was conceived essentially as a seat of government to house the palaces and accommodate his troops. Unlike al-Mansuriyya in Tunisia, al-Qahira was built to a rectangular plan and its mud-brick walls encompassed the area which still forms the nucleus of old Cairo. The plan of the main streets today is essentially Fatimid, with the north-south axis, al-Mu'izz street, terminating at the gates Bab al-Futuh and Bab Zuwaila, and the east-west axis following roughly along the line of al-Muski.

There is little today that remains from the Fatimid era, and the Khan al-Khalili bazaar now covers the site once occupied by the two great palaces and royal cemetery. In contrast to its present urban density, al-Qahira was originally very spacious, with land for animals and gardens and orchards irrigated by wells and water-wheels. According to the eleventh-century Persian scholar Nasir i Khusraw (1004–88), the city contained 20,000 shops, 20,000 houses, numerous caravanserais and four congregational mosques. Most of the original mud-brick walls had disintegrated when Nasir i Khusraw visited the city in 1046, but he describes the houses as being higher than the ramparts, spaciously planned, built of marble and up to five or six storeys high. There were two palaces, the eastern and western, separated by a parade ground, and the palace population was estimated at 30,000, including 12,000 servants. The larger palace had up to 4,000 rooms with great halls, including the Emerald Hall, the Divan and the throne-room with its gold throne set on silver steps, sculpted with hunting scenes and surrounded by a golden filigree screen. Similar hunting motifs have survived in fragments of decorative woodwork from the western palace, suggesting some truth among the hyperbole of these descriptions. There were extensive gardens between al-Qahira and Fustat and much of this area suffered severe flooding in the summer.

Despite the number of shops and caravanserais in al-Qahira, Fustat remained the commercial and economic centre, with its thriving markets, port and dockyards. Nasir i Khusraw's description of the Market of Lamps is interesting because, apart from the astonishing variety of fruit and vegetables, he described the pottery and glass. He admired the quality of the green glass and claimed that the lustre pottery was so fine you could see your hand through it. The streets were narrow and the houses, built of baked brick, were frequently

five to seven storeys high. Nasir i Khusraw describes houses of seven to fourteen storeys accommodating up to 350 people, but this was almost certainly an exaggeration. Some houses had terraced roof gardens with shrubs, orange trees and bananas, and he describes one which was irrigated by a bull turning a contraption lifting water. Nasir i Khusraw's view of al-Qahira and Fustat was highly flattering, which may be due to a Shi'ite bias on his part (he became an Isma'ili missionary on his return to Balkh). Other contemporary writers are less favourable, commenting on the pestilential nature of both cities, the squalor, the poor quality of the water and lack of hygiene. The northern location and higher elevation of al-Qahira was, however, slightly more salubrious.

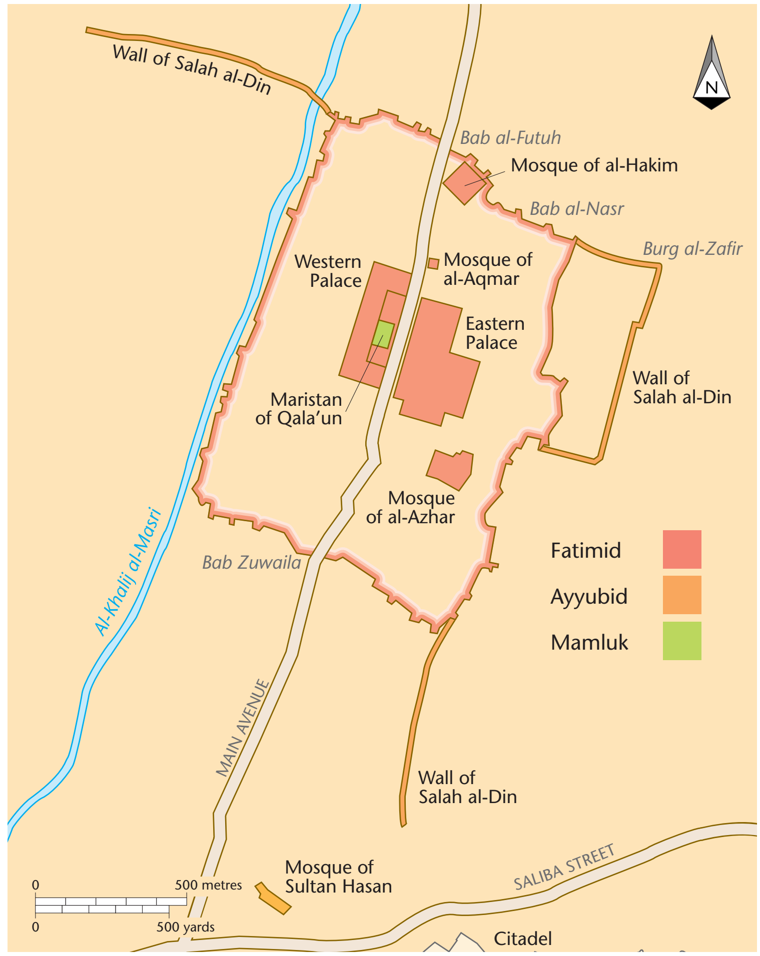
The original mud-brick walls of al-Qahira had crumbled by 1046 and a major reconstruction in brick and stone took place between 1087 and 1092 under the direction of Badr al-Jamali, vizier to the caliph al-Mustansir. Badr al-Jamali was originally an Armenian slave who had risen through the ranks to become governor of Damascus and Acre. In 1073 the caliph secretly invited him to Cairo to help restore order, following a period of plague and famine during which the country had fallen into a state of anarchy and destitution. By that time al-Mustansir had become a puppet ruler in the hands of his insubordinate Turkish and Berber troops and he needed outside help. When Badr al-Jamali arrived with his Armenian and Syrian bodyguard he ruthlessly rounded up and executed in one night all the leading palace officials and Turkish commanders. He was then given complete authority over the army, the missionaries and the bureaucracy, and became the de facto ruler of Egypt. The building programme of al-Jamali, which involved extending and strengthening al-Qahira's walls, was synonymous with his reconstruction of the country.

According to al-Maqrizi the gates of Bab al-Futuh, Bab al-Nasr (Gate of Conquest) and Bab Zuwaila were built by three Armenian Christians from Edessa in eastern Anatolia. This is plausible, because after the Seljuk conquest of that region many Armenians settled in Cairo and al-Jamali might have felt some obligation to find employment for his kinsmen. It also explains some of their Byzantine features, although the precise origins of its design cannot be located in the Edessa region. Edessa's Byzantine towers and gates were once renowned, but the surviving fragments of octagonal construction provide no obvious pointer to Cairo's gates. Byzantine fortifications were regarded as the model for the development of western Islamic military architecture and the

evidence here supports that view (they were also once regarded as the basis for Crusader architecture, a view which was strongly challenged by T. E. Lawrence). The Byzantine features include the use of rounded arches, domes, pendentives, cushion voussoirs and the use of gates rather than portcullises.

The Fatimid gates and walls visible today are generally acknowledged as the finest examples of pre-Crusader military architecture in the Middle East. The most imposing stretch of fortification is at the north of the city stretching some 200 metres between Bab al-Nasr and Bab al-Futuh, taking in the north wall of the mosque of al-Hakim. Bab al-Nasr is flanked by two sturdy three-tiered rectangular towers divided two-thirds of the way up by a strong horizontal band of corbelled moulding. The first two tiers are built of solid masonry with dressed stone encasing a solid rubble core, and the base is braced with horizontally inserted columns. The upper chambers on the third storey are roofed with domes set on pendentives and the towers were originally crowned with round-headed crenellation. An engraving (1812) in *Description de l'Egypte* clearly shows the crenellation on the right-hand tower. Today the crenellation is bricked in and most of the arrow slits have been replaced with wider apertures for guns. Creswell attributed these alterations to Napoleon's troops who occupied the towers between 1798 and 1801.

Under a Kufic inscription proclaiming the Shi'ite *shahada* (profession of faith), the imposing semi-circular entrance leads into a spacious bay flanked by recesses and roofed with a cross-vault crowned with a rosette medallion. Decorative features on the front of the towers include a band of Kufic under the corbelled moulding and heraldic devices in the form of shields. These are both circular and pointed in the Byzantine and Norman fashion, decorated with bosses, moulded rims and serrated edges. According to Behrens-Abouseif they represent the shields of the city and have a protective,



ABOVE: Fatimid Cairo.

BELOW: Bab al-Nasr.



talismanic role.[3] Such armorial bearings are unusual in Egypt, although heraldry was used on glass and metalware during the Mamluk period. Heraldic beasts such as lions and dragons are common devices on gates and towers across the Muslim world. In their protective capacity they are the Islamic counterpart to Byzantine icons which were once frequently placed on city gates and fortifications. One of the most famous icons in the Byzantine world was the Mandylion of Edessa, an image of Christ imprinted on cloth, which according to tradition was discovered walled up in a niche above the city gate. Its whereabouts were revealed in a dream sent to the Bishop of Edessa and its miraculous powers were supposed to have saved the city from the Persians in 544.[4]

BELOW: Bab al-Futuh.



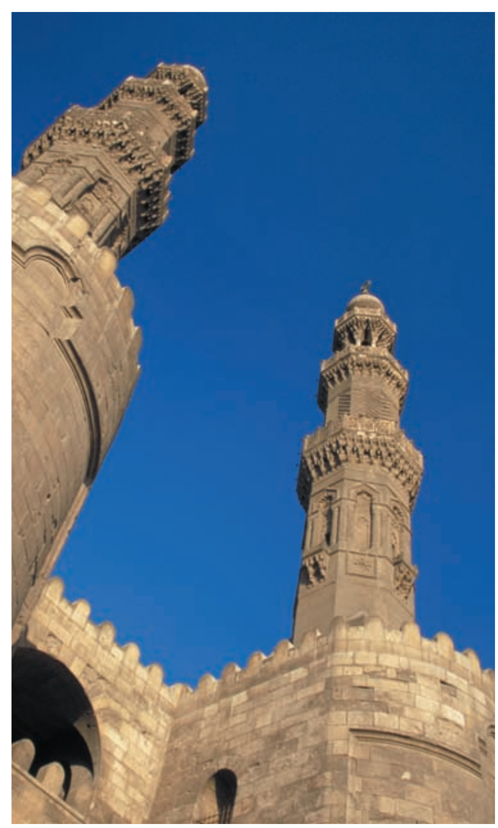
Bab al-Futuh, like Bal al-Nasr, is built of solid masonry to two-thirds of the way up, and is flanked by massive double-storeyed towers with bulging semi-circular façades. The surface of the lower storey is indented by round-arched recessed panels on the front and at each side. The inner arches, flanking the gate, are decorated with cushion voussoirs, a feature which appears more commonly in later Islamic and Crusader architecture (they can be seen in the portal of al-Zahir Baibar's mosque and in the façade of the Church of the Holy Sepulchre in Jerusalem). On the upper storey of each tower the surface is broken on three sides (except the left-hand side of the left tower) with recessed rectangular panels containing arrow slits set in round-arched panels. A moulding of parallel lines and loops frames and links the rectangular panels, and the towers are crested with round-headed crenellation. The interior structure of the gate is the reverse of Bab al-Nasr. Here, a short barrel-vault joins the main entrance to the inner bay which is roofed by a dome on pendentives, and the long upper tower chambers are roofed by cross-vaults crowned with medallions. Bab al-Nasr and Bab al-Futuh, with their connecting walls, form a magnificent architectural ensemble which also incorporates al-Hakim's mosque with its battered corner tower rising like a huge pylon to support the shaft of its richly faceted minaret. It is a breathtaking monumental massing of cubic, semi-circular and cylindrical form, and this simple combination of geometrical forms continues at various intervals along Salah al-Din's walls to the west.

Bab Zuwaila (1091–2), to the south of al-Qahira, has large semi-circular towers, like Bab al-Futuh. It supports two of the finest Mamluk minarets in Cairo (1420), which serve the mosque of Sultan Mu'ayyad located next door. Like the other gates, its towers are built to two-thirds of their height with solid masonry, and the smooth stonework of the curved façades is relieved only by arrow slits and a moulding which defines a shallow vertical panel crowned with a pointed arch. The inside flanks of the towers contain recessed panels with lobed arches in the Moorish style – the earliest examples of this type in Cairo. Between the two towers is a semi-circular gate supporting a gallery, and above this a connecting open semi-circular arch that forms a thick-set barrel-vault. It is thought that the gallery once accommodated musicians who accompanied ceremonial processions as they passed through the gate.[5] The vestibule inside the gate was originally flanked by two semi-circular niches but the one on the east was altered by Mu'ayyad. The whole interior space is covered with a shallow dome set on pendentives in the Byzantine style.

BELOW: Bab al-Futuh.

BOTTOM: Bab Zuwaila.









Although little remains of its original structure, the most important and enduring monument of the Fatimid age is the mosque of al-Azhar. This was established as a place of worship and seat of learning. It remains to this day the foremost centre for the study of Sunni law and theology. Its educational role was originally confined to the study of Isma'ili jurisprudence but the common assumption that the mosque was a centre of Isma'ili missionary activity is a misconception.[6] Before the rise of the Fatimid caliphate, the propagation of Isma'ili belief had been conducted in secret through missionaries who transmitted knowledge and wisdom through both the external (exoteric) and internal (esoteric) interpretation of religious law (the *sharia*). The exoteric knowledge, which governs everyday life, was regarded as accessible to all Muslims, but esoteric knowledge was only passed on to initiates. With the establishment of the Fatimid caliphate the teaching of the missionaries became open and institutionalized, and the supreme *qadi* (judge) responsible for such matters became a significant political appointment. He held the joint positions of supreme

ABOVE: Mosque of al-Azhar.

OPPOSITE PAGE: Mosque of al-Azhar.



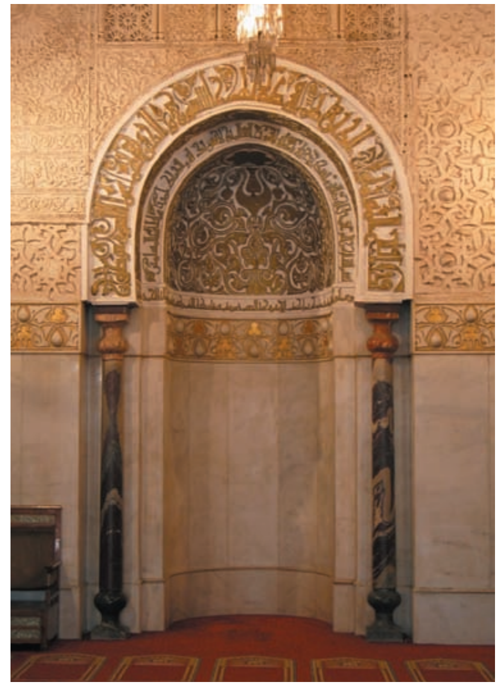
ABOVE: Prayer hall of Mosque of al-Azhar.

judge and missionary, and he was the repository of exoteric and esoteric knowledge. The most important appointment to this office was that of al-Nu'man ibn Muhammad, whose book *The Pillars of Islam* provided the foundation for the Ismai'ili *madhhab*.[7]

After becoming supreme *qadi* in 948, al-Nu'man taught the exoteric (*zahir*) interpretation of the *sharia* after the Friday prayers in the mosques of Qairawan, Mansuriyya and al-Azhar. It was the exoteric teaching of the *sharia* rather than the esoteric doctrine (*batin*) that preoccupied the scholars of the mosque of al-Azhar. In 974, al-Nu'man died and the office of supreme *qadi* was passed on to his sons and grandsons – all distinguished jurists. Regular teaching at al-Azhar, however, did not take place immediately, and it was not until 988, during the reign of the imam-caliph al-Aziz, that space was allocated for thirty-five teachers to give public lectures on jurisprudence. Lectures on the secret doctrine of the *sharia* (*majalis al-hikma*) were given to initiates in the privacy of the royal palace – it must be remembered that the abode of the imam-caliph was a sacred domain. The imam-caliph was the ultimate religious authority and he vetted the supreme *qadi*'s teaching texts. Tutorial groups in

both al-Azhar and the palace were widely differentiated, but it is interesting to note that classes for women existed in both the exoteric and esoteric branches of the law, and that the education of women has always been valued within Ismai'ili Islam.[8]

The original mosque of al-Azhar followed the Tunisian model with a prayer hall five aisles deep facing a *sahn* bordered on each of the other three sides with *riwaq*s three aisles deep. The aisles of the prayer hall ran parallel to the *qibla* wall, but a central aisle, arranged perpendicular to the *mihrab*, was wider and taller, giving it a processional emphasis. Three domes were placed over the *qibla* aisle, one at the centre over the *mihrab*, and one at each end in the corners of the prayer hall. The rounded arches of the arcades were constructed of stucco-covered brick held by tie-beams and supported on recycled antique columns. Of this original mosque most of the south-west wall remains, as well as fragments of the north-east wall with surviving decorative stucco and round-headed window grilles. The hood of the original stucco *mihrab* also survives. This is set in a frame of finely chiselled Kufic with a hood revealing a tightly scrolled pattern of tendrils and palmettes entwining a central five-lobed palmette surmounted by a bulbous chalice. The strength and richness in the carving of the hood contrasts with the lighter decoration in the surrounding spandrels, which is the work of Sultan Salar and was completed after the earthquake of 1303. Its fragility and lace-like geometrical forms set in flat panelled niches are similar to the surfaces of the *mihrab* he installed on the north-west wall of Amr's mosque.



ABOVE: Fatimid *mihrab* in the Mosque of al-Azhar.

The Fatimid stucco panels on the opposite wall are exuberantly laden with a plenitude of vegetal motifs, including a palm tree, palmettes and a grape vine framed by bands of Kufic. Certain aspects of the surface drilling recall Samarran stucco but the style is more densely floral and organic. Later Fatimid work, dating from the reign of the imam-caliph al-Hafiz (mid-twelfth century), can be seen in the dome in the *qibla riwaq* at the north-west end of the central aisle. Domes located at this point, corresponding to the *mihrab* dome, are common features of Tunisian architecture and they emphasize the ceremonial and processional aspect of the wider central aisle. The dome is supported on pointed keel-arches (the shape of an upturned boat) resting on antique columns braced with wooden tie-beams. These features define the structural characteristics of Fatimid architecture, providing a much lighter contrast to the solid brick piers of Tulunid architecture. The keel-arch was a Fatimid innovation and it subsequently replaced the round arches of the earlier mosque. It





ABOVE: Stucco in the courtyard of the mosque of al-Azhar.

was to remain, either in a structural or decorative capacity, a distinctive feature of Cairene architecture up until the Ottoman conquest. The *qibla riwaq* dome rests on four squinches alternating with windows made up of stucco grilles. One beautiful window grille consists of a diagonal trellis with intersecting stellar patterns, supporting a delicate interlace of quatrefoils, set with the earliest surviving examples of green and yellow stained glass. Bands of richly carved Kufic outline the windows and squinches as well as forming a continuous frieze around the bay and frame the keel-arches. Dense patterns of arabesque fill the spandrels of the arches, and the interior of the dome consists of palmettes, stalks, leaves and fruit.

The al-Azhar mosque has often been radically changed since the tenth century, most noticeably in the eighteenth century by the amir Abd al-Rahman Katkhuda, a philanthropist and passionate builder, who raised the floor and extended the prayer hall four bays beyond the original *mihrab*. This irregular extension, coupled with the retention of the original *mihrab*, destroyed the symmetry and continuity of space as well as neutralizing the processional aspect of the central aisle. There are now two *mihrab*s providing two points of focus, and the decentralization of space is further aggravated by the positioning of Katkhuda's off-centre *mihrab*. It is, nevertheless, an impressive hypostyle space with each bay forming a space frame made up of tie-beams criss-crossing and intersecting at right angles above the impost blocks of the slender antique Corinthian columns. They form an open framework of cells appropriate for individual prayer and informal teaching purposes. Traditionally the teacher would sit at the foot of the column surrounded by his pupils, and according to Muqaddasi, in the tenth century there were 120 such groups.[9]

Katkhuda's work can also be seen in the façade of the main entrance to the mosque, the Bab al-Muzayyinin. Its double entrance is surmounted by two moulded semi-circular arches with tympanums decorated with trefoils, carrying a gilded and enamelled frieze panelled intermittently with cypress trees in the Ottoman style. As you pass through a corridor you enter the *sahn* of the mosque under the gate and minaret of Sultan Qa'it Bay. The *sahn riwaqs*, which are mainly a modern reconstruction, consist of arcades of keel-arches, joined by tie-beams, mounted on antique marble columns. Above the apex of each arch is a fluted sunburst medallion encircled with a delicate border of alternating scrolls and arrow-heads crisply set in a finely inscribed zigzag of chevrons. In the spandrels of the arches, framed with a band of Kufic, are recessed keel-arched niches flanked with colonnettes surmounted

with fluted hoods. The whole façade is lightened at the top with the delicate open fretwork of a stone balustrade with a crenellation of stepped merlons. Architectural emphasis is given to the central aisle of the *qibla* façade by flanking clusters of triple columns and a *pishtaq* – a lofty portal framing the central arch, built higher than the rest of the *riwaq* arcade. The *pishtaq* was an innovation of al-Hafiz and is a common feature in eastern Islamic architecture.

Two majestic features which now dominate the *sahn* are the minarets of Sultan Qa'it Bay (1483) and al-Ghuri (1510). These are Mamluk, and in their richness, bravura and imposing scale they mark, in their different ways, the best of the late Burji Mamluk period. The reign of Qa'it Bay saw the maturation and flowering of Mamluk architecture and his buildings are noted for the virtuosity of their stone carving. All this is evident in the rich density of his minaret above the entrance to the *sahn*. It is made up of three shafts, two octagonal and one cylindrical, separated by two finely fretted balconies supported on corbels cut into crystalline, stalactite sections known as *muqarna*s. *Muqarna*s form a central feature in the vocabulary of Islamic architecture, shaping vaults, niches and friezes in both a structural and decorative capacity. Each side of the first octagonal shaft of Qa'it Bay's minaret is decorated with keel-arched panels with fluted hoods, separated and articulated at each corner by triple clusters of colonnettes. The second shaft above it is decorated with plaiting, and the third is pierced by four arches and crowned with a third balcony surmounted by a bulbous finial. Al-Ghuri's minaret is taller, with a square base supporting two octagonal shafts and a third level made up of two rectangular shafts pierced on each side by slits with round-headed horseshoe arches. The first and second-level shafts of the minaret are separated by fretted balconies supported by *muqarna*s, and the twin rectangular shafts at the top are crested with *muqarna*s balconies and bulbous finials. Each side of the first storey is decorated with keel-arched panels, the second storey with blue faience, and the masonry is subtly variegated by the periodic alternation of courses of soft terracotta and biscuit-coloured stone.

When Salah al-Din overthrew the Fatimid dynasty in 1171, al-Azhar's status as a congregational mosque was removed, but it was restored in 1260 by the Mamluk sultan Baibars al-Bunduqdari and its role as a centre of learning was re-established and extended. It subsequently became the principal centre of legal and theological studies in the Sunni world. The rise of the Fatimid dynasty and the success of its missionary activity prompted the Sunnis to build



ABOVE: Minaret of Qa'it Bay.

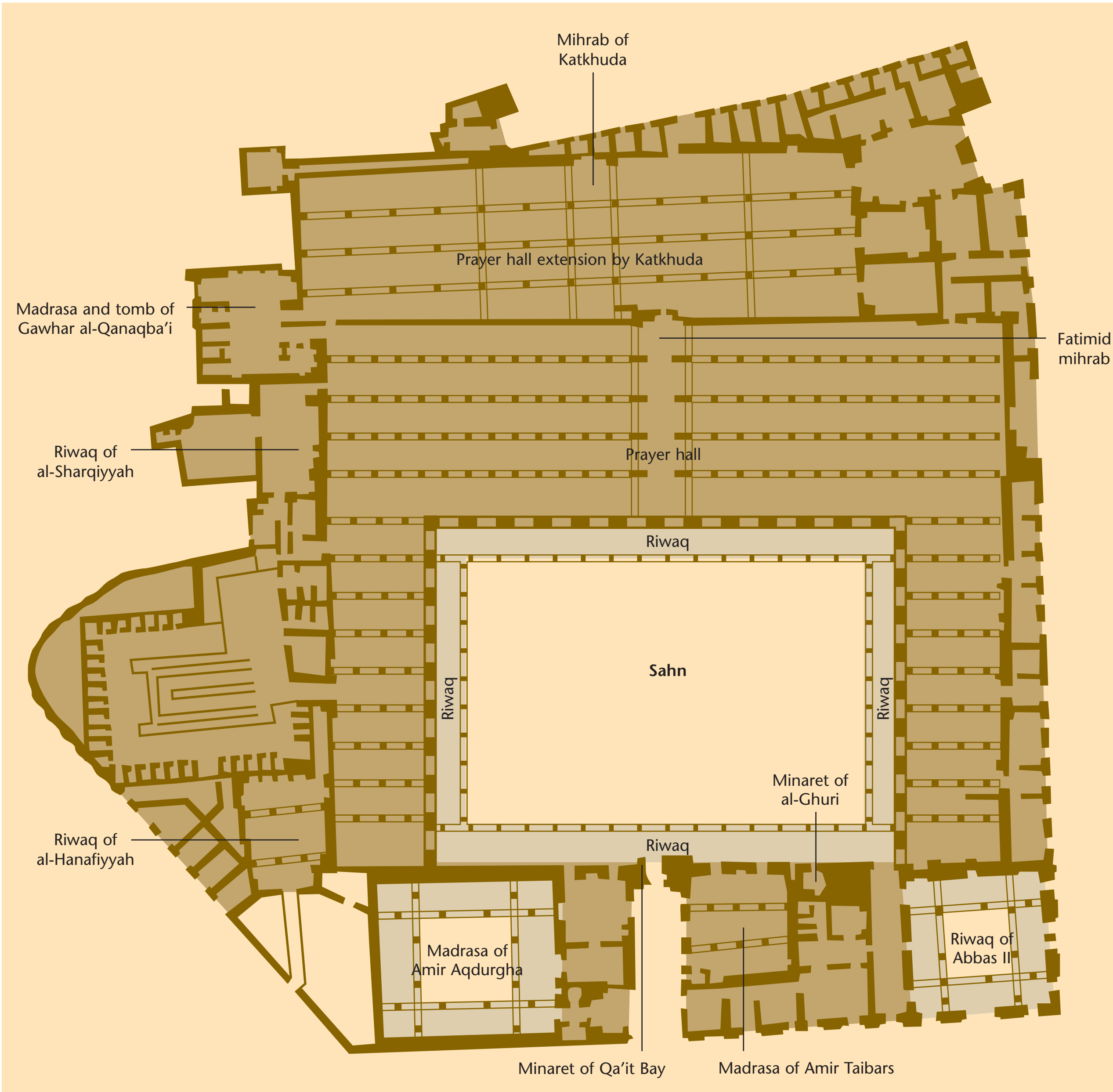


ABOVE: Minaret of al-Ghuri.

theological colleges in order to safeguard and promote the hegemony of orthodoxy. These institutions, known as *madrasa*s, originated in eastern Persia where they grew out of small informal establishments attached to the houses of teachers and Sufi sheiks. When the maintenance of orthodoxy became a political necessity, state-funded *madrasa*s were set up, the first being the Nizamiya founded by the Seljuk vizier, Nizam al-Mulk, in Baghdad in 1068. It became an institution renowned for its excellence and served as a model for subsequent *madrasa*s elsewhere in the Muslim world. Over the centuries *madrasa*s were regularly added to the fabric of the mosque of al-Azhar, contributing to the irregularity and complexity of its architectural form.

Two of the earliest surviving *madrasa*s, dating from Mamluk times, flank the entrance corridor to the mosque. On the right-hand side is the *madrasa* and tomb of Amir Taibars (1309), and on the left is the *madrasa* and tomb of Amir Aqbugha (1333–9). The *madrasa* and tomb of Amir Taibars was dedicated to the study of the Malikite and Shafi'i *madhahib* but it now houses manuscripts from the library of the mosque. It is entered through an Ottoman façade by Katkhuda but only the *qibla* wall with its magnificent inlaid polychrome *mihrab* dates from its foundation. The *madrasa* and tomb of Amir Aqbugha also contains library manuscripts. Its entrance is original, and so is the decoration on the *qibla* wall, the glass mosaic in the *mihrab* and the octagonal shaft of the minaret, but the prominent dome of the tomb chamber rising from its fourteen-sided drum is Ottoman. The other Mamluk *madrasa* and tomb is that of Gawhar al-Qanaqba'i (1440), a learned Sudanese eunuch who rose to become treasurer to Sultan Barsbay (1422–37). His small *madrasa* and tomb, situated to the north-east of the prayer hall, is cruciform in plan with a richly marbled floor and walls lined with cupboards inlaid with ebony, ivory and mother-of-pearl. The exterior of the small stone dome over the tomb chamber technically embodies all the assurance, ingenuity and virtuosity of the Barsbay period with its exquisitely cut arabesque.

In addition to these Mamluk *madrasa*s, the *riwaq*s of al-Hanafiyyah and al-Sharqiyyah were added to the al-Azhar mosque in the nineteenth century for teaching purposes, and in 1897 the *riwaq* of Abbas II was built to provide rooms for the officials of the mosque and further library and student facilities. In recent years, al-Azhar has expanded into a modern university with faculties teaching medicine, agriculture and engineering. In Fatimid times, during the reign of al-Hakim, secular disciplines like these were taught



ABOVE: Plan of the mosque of al-Azhar.

outside the mosque in an establishment called the Dar al-Ilm (House of Knowledge) situated in the precincts of the palace. This was the nearest approximation to a medieval university. It was founded by the imam-caliph al-Hakim in 1005, and was probably modelled on the Dar al-Ilm established by Abu Nasr Sabur ibn Ardashir in the suburbs of Baghdad in 991–3.[10] According to the court chronicler, al-Musabbi, everyone, from all walks of life, had access to it, and lectures were given by Qur'an readers, astronomers, mathematicians,

logicians, grammarians, philologists and physicians.[11] The most important scientific work to emerge from the Dar al-Ilm was the astronomical chart, *al-zij al-Hakim*, by Ahmad ibn Yunis al-Hakimi. This remarkable work was produced without the aid of an observatory, and the imam-caliph al-Hakim, eager to further the study of astronomy, commissioned the building of an observatory on the Muqattam hills. However, the work was never finished and subsequent attempts to build the observatory were not entirely successful. According to Behrens-Abouseif, an attempt was made to reconstruct the observatory on the Bab al-Nasr during the reign of al-Amir (1101–31) but this project was never completed.[12]

The great library of Dar al-Ilm was estimated to contain between 120,000 and 200,000 books, an astonishing figure bearing in mind that the Vatican library established by Pope Sixtus IV in 1475 contained 1,527 volumes, and Oxford's principal library, the Bodleian, opened in 1602 with 2,000 volumes. The Dar al-Ilm library was ransacked by Turkish troops in 1068, and what survived was gradually sold off and destroyed by Salah al-Din in his general purge of Isma'ili literature. Like the great library of Alexandria it was destroyed in a piecemeal way. The destruction of so much Isma'ili literature has left enormous problems regarding historical evidence, because histories are usually written by the victors, and most of the surviving accounts of the Fatimids are written by Sunni historians. As mentioned before, one of the few Shi'ite chroniclers of the period was Nasir i Khusraw, who painted a rosy picture of Fatimid Cairo. Sunni accounts of the Fatimid period are, however, unsympathetic, and in the case of the imam-caliph al-Hakim, we are presented with a personality who was demonized and described, among other things, as unpredictable, sadistic, despotic and insane.

According to Sunni historians, al-Hakim inaugurated a twenty-five year reign of terror in which he murdered and tortured his viziers, courtiers and officials on impulse, and persecuted the Jews, Christians and Sunni Muslims in equal measure. He put restrictions on Sunni worship, made the Jews and Christians wear special dress and seized church property. It was his destruction of the Church of the Holy Sepulchre in Jerusalem which among other things prompted Pope Urban's call for a Crusade. He was a misogynist who placed women under a form of house arrest and stopped them wearing jewellery. To enforce this injunction cobblers were not allowed to make women's outdoor shoes. He detested dogs even more than women and destroyed many of them. He was puritanical and prohibited wine, beer, gambling, dancing, chess and a popular

vegetarian dish known as *mulukhiyyah*. His lifestyle was austere and his habit of making incognito nocturnal visits to the *suq*s of the city inspired many of the stories in *The Thousand and One Nights*. He became more volatile as he grew older, and when he declared his divinity and his supporters entered the mosque of Amr proclaiming the blasphemous *bismillah* (invocation) 'In the name of al-Hakim, the compassionate and merciful', a riot broke out. The city of Fustat was looted and burned for three days. Soon after these events al-Hakim disappeared in the Muqattam Hills.[13]

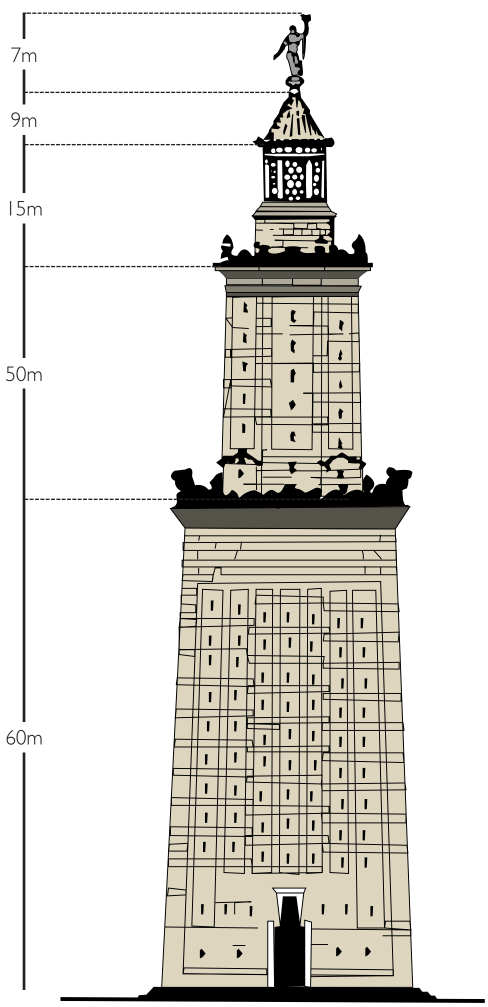
Five days later his solitary ass and the remnants of his slashed clothing were found, but never his body. He was probably assassinated as a consequence of a conspiracy involving his sister, but his supporters refused to believe he was dead. They believed their divine caliph had gone into occultation and would return to rule, like the Mahdi (in Shi'ite belief, a Messianic spiritual leader), in glory and peace. The leader of these followers, al-Darazi, fled to Syria and formed the sect known as the Druzes. These damning accounts by Sunni historians do not, however, quite square with other descriptions of al-Hakim's love of learning, sense of religious duty, almsgiving, lack of personal ostentation and accessibility to the common people. He established a number of pious foundations including the Rashida mosque in Fustat and a mosque in Maks and he completed the great mosque which bears his name near the gates of Bab al-Nasr and Bab al-Futuh. This mosque was begun by his father, the imam-caliph al-Aziz, in 990 and completed by al-Hakim between 1003 and 1013.

Originally the al-Hakim mosque was built outside the city walls but was later incorporated into al-Jamali's walls, forming a part of that massive architectural ensemble which includes Bab al-Nasr and Bab al-Futuh. Richard Ettinghausen and Oleg Grabar suggest it served principally as a royal sanctuary and imperial mosque for ceremonial purposes, isolated from the main centres of population.[14] Its plan and form combine features from Ibn Tulun's mosque, al-Azhar and the mosque of Mahdiya in Tunisia. It has the same monumental simplicity as Ibn Tulun and is likewise built substantially of brick with pointed arches springing from rectangular piers, but its proportions are taller. The plan of the prayer hall follows the Tunisian model with a wider, taller, perpendicular central aisle leading towards the *mihrab*. Three domes are arranged along the transverse *qibla* aisle, one over the *mihrab* and two in the corners of the prayer hall. Unlike al-Azhar and the Tunisian mosques, there is no corresponding dome at the front of the central aisle facing the *sahn*. This central arch in the *qibla riwaq* is



ABOVE: Northern minaret of mosque of al-Hakim. *Mabkhara* top added by Baybars al-Jashankir.

BELOW: Pharos lighthouse, Alexandria.



taller than the rest and is dignified by its setting in a tall crenellated portal. It is flanked inside with paired marble columns, and above its apex is a band of three stucco grilled windows. Blind recessed niches adorn its spandrels, but elsewhere the spandrels in the *riwaq* arcades are pierced and lightened with pointed arched openings in similar fashion to Ibn Tulun.

The exterior of the mosque is faced with dressed stone, and the long sweep of its main façade recalls the mosque at Mahdiya. It is broken at the centre in the Tunisian style with a strong cubic projecting portal decorated with niches containing arabesques similar to those in the *mihrab* hood of al-Azhar. The façade terminates at each end with huge battered corner salients which appear to support the richly moulded and faceted minarets. These massive, cubic bastion-like features were added by al-Hakim and Badr al-Jamali to strengthen and incorporate the mosque into the general scheme of fortification. Despite their mass and weight they are not load bearing, but immure and preserve the lower shafts of the original minarets. These were revealed when the rubble infill between them and the containing salient wall was removed during restoration work. The enclosing function of these structures is similar to the cubic corner towers of the Mahdiya mosque in Tunisia which contain water cisterns. The beautiful minarets that now form the superstructure were added by Baibars al-Jashankir after the earthquake of 1303. The lower shafts of the original minarets differ, the northern being a tapering cylinder on a square block, and the southern having a taller rectangular shaft supporting an octagonal second tier.

Hillenbrand has suggested that the multi-partite division of the Egyptian minaret may derive from the Pharos, the famous Hellenistic lighthouse of Alexandria.[15] It has been a long held view that the minaret has its architectural origins in the lighthouse, and, as Hillenbrand explains, the word 'minaret' stems from the Arabic word *manara*, meaning 'place of light or fire'.[16] Certainly a number of North African minarets doubled up as watch-towers, beacons and lighthouses. However, the earliest minarets evolved in Syria, taking their simple rectangular form from church towers and it was this format that was widely adopted in North Africa and Spain. The multi-partite division of the minaret is essentially an Egyptian feature and for this reason the Pharos may well provide a clue to its development. Built by Ptolemy II (c. 279 BC), the Pharos was one of the wonders of the ancient world and unlike many of Alexandria's Hellenistic buildings, it was a much-used and valued



monument, being restored by a number of sultans, including Ibn Tulun. It suffered earthquake damage on numerous occasions, losing its lantern in 700 and the octagonal tier in 1100, before its final destruction by earthquake in 1307. It was made up of three main shafts – square, then octagonal and cylindrical – and we can piece together its original appearance from contemporary descriptions, Hellenistic coins, terracotta lamps and the surviving Ptolemaic lighthouse at Abu Sir which is a similar three-tiered structure. Although Creswell dismissed its influence, it seems unlikely that such a striking and remarkable landmark would have been ignored by generations of Islamic architects.

According to Behrens-Abouseif, the horizontal bands and lozenges on the original northern shaft are similar to those on the minaret of the Great Mosque at Sfax (Tunisia), and the southern shaft is decorated with foliated Kufic inscribed with al-Hakim's name.[17] The southern salient with its cubic mass and inclined walls is a beautifully proportioned two-tiered structure decorated near the base with a horizontal band of foliated Kufic. The first storey is crowned with a band of open-work crenellation resembling that on the mosque of Ibn Tulun and the second storey has a cornice decorated with strapwork. The two minarets by Baibars al-Jashankir (c. 1309–10) are among the finest early Mamluk minarets built in



TOP & ABOVE: The mosque of al-Hakim.

the so-called *mabkhara* style. *Mabkhara*, meaning 'incense burner', is an apt description of the open, perforated nature of the stonework. Such minarets are invariably multi-partite, rising from a rectangular base supporting an octagonal shaft that is crowned with a dome in the shape of a ribbed helmet. The northern minaret of al-Hakim has an octagonal shaft decorated with tall keel-arched niches pierced by small square and multifoil windows. It is proportioned to allow for greater elaboration towards the top, where three bands of richly sculptured *muqarnas*, pierced intermittently by multifoil windows, are capped with the undulating relief of the ribbed dome. The southern minaret follows a similar decorative scheme on a smaller scale.

In the early 1980s the mosque was substantially rebuilt and it now functions, in mint condition, as an Isma'ili mosque. Its reconstruction has been controversial because much of the original fabric has been obscured, and what was an evocative ruin has been insensitively transformed. For centuries it had been abandoned, and its awesome ruins, so beautifully expressed in Prosper Georges Marilhat's elegiac painting of 1840, were immensely romantic and sublime. Its interior is now pristine white and the surface of the floor is shiny, but these hard unyielding surfaces are occasionally softened by fragments of original Fatimid work. The severity of the tall pointed *riwaq* arches, with their sharp right-angled piers, contrasts markedly with the more rounded forms of the arcades within. Here the piers resemble those of Ibn Tulun with engaged columns in the corners, and the arches they support are more animated by a slight horseshoe return. The arcades of the *riwaq*s and prayer hall have the same monumentality and nobility of Ibn Tulun, but the decoration is sparse and is mainly limited to bands of Kufic carved in stucco. The most unexpected survivals *in situ* from the Fatimid era are wooden tie-beams displaying a scroll of bevelled volutes in the Samarra C style.

The emerging sculptural richness of Fatimid stone carving can be seen at its best on the façade of the small mosque of al-Aqmar (1125) in al-Mu'izz street on the main north-south axis of al-Qahira. This façade is an architectural masterpiece. Its right-hand flank was until recently obliterated by neighbouring buildings, but it has now been reconstructed and the mosque's original symmetry restored. The main compositional feature of the façade is its strong, vertical, tripartite division formed by three keel-arched niches. The taller, deeper niche at the centre of the projecting portal has a fluted hood with a medallion at the centre. The flutes are deeply cut, forming

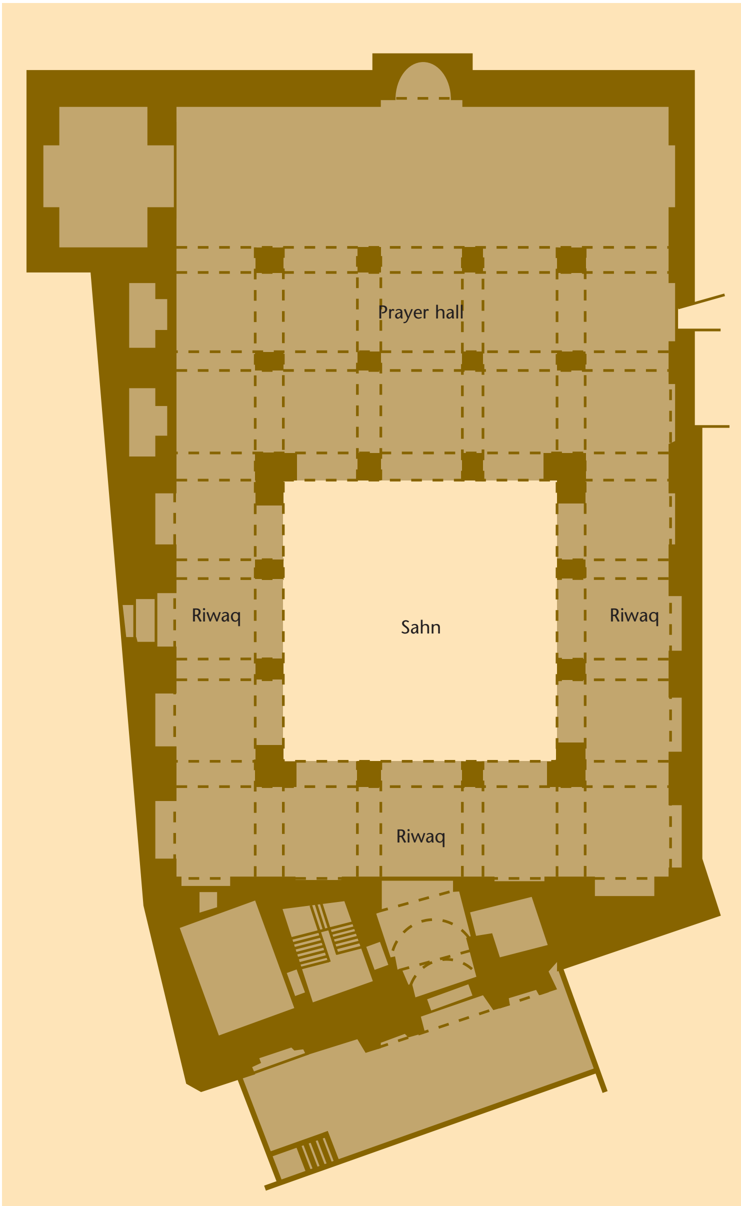
strong horizontal ribs at the bottom which gradually rise and radiate into a sunrise surrounding the central medallion. They terminate at the scalloped edge of the keel-arch where they are framed with finely inscribed interlacing circles. The medallion, with its delicately fretted stonework, is one of the most refined and beautifully balanced motifs in Fatimid art. It consists of a series of concentric rings composed of alternating bands of calligraphy and scrollwork. At the centre is a deeply drilled cats-cradle of Kufic repeating the name of Ali wreathed with a circle of scrollwork. The next circular band contains a repetition of Muhammad's name, which in turn is framed and circumscribed with a broad banded, richly carved foliate scroll.

The same combination of medallion and fluted hood is repeated less elaborately in the flanking niches of the façade, and this device becomes a feature of later Fatimid buildings such as the *mashhad* of Sayyida Ruqayya (1133) and the mosque of al-Salih Tala'i (1160). Another innovation can be seen at the top of the tall square-headed recessed panels on either side of the entrance, where *muqarnas* appear for the first time in Egyptian architecture as decoration on a flat surface. Above these panels the portal is further elaborated with shallow blind niches with scalloped arches springing from flanking colonnettes. A band of foliated Kufic forms the cornice of the façade and a similar, narrower band draws a horizontal line across it on a level with the springing of the keel-arches. Circular medallions have now been restored above the apexes of the flanking niches, and in shallower relief the façade is punctuated with smaller decorative panels and lozenges variously decorated with vases and interlace. Altogether, this is a beautifully proportioned and sculptured façade, in which the surface decoration and various strata of relief are chiselled, drilled, hollowed and moulded to exploit the contrasting play of sunlight and shadow.

The al-Aqmar mosque is a *masjid* (neighbourhood mosque) rather than a *jami* (congregational mosque), the earliest surviving example of this type. It has a bent plan because the axis of al-Mu'izz street does not align with Mecca. The façade masks a structure, wedge-shaped in plan, incorporating a barrel-vaulted entrance, a small space to the right and a room and staircase on the left. The square *sahn* is surrounded on three sides by single-aisled keel-arched *riwaq*s, and the small prayer hall is three aisles deep. The bays of the *riwaq*s and prayer hall are covered by shallow brick domes except for the transverse *qibla* aisle which has a flat timber roof. It is assumed that these brick domes form a part of later



TOP: Detail of the façade of the mosque of al-Aqmar.



ABOVE: Plan of the mosque of al-Aqmar.

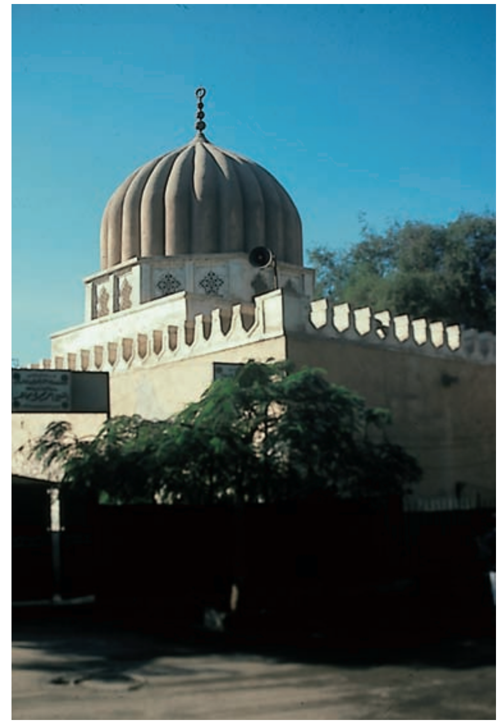
restoration work carried out by the Mamluk Amir Yalbugha al-Salimi in 1397, because they resemble domes in the *khanqah* of Sultan Faraj ibn Barquq of similar date (1400–11), and no such domes are known during the Fatimid period. The structure of this mosque is closer in spirit to al-Azhar, with slender antique columns and tie-beams holding and supporting keel-arches framed in the Fatimid manner with elegant bands of Kufic. According to Behrens-Abouseif, the mosque is built, like that of al-Salih Tala'i, over a series of shops, the rents of which supported the upkeep of the mosque. Unlike the al-Salih Tala'i, the shops of the al-Aqmar mosque have not yet been excavated.[18]

During the first half of the twelfth century the prestige of the Fatimid regime's lineage was greatly strengthened by the popular devotion paid at the tombs of the Prophet's descendants in the Southern Cemetery. The Prophet's progeny, through Fatima and Ali, had a unique status, and many of these monuments signify something more than just tombs – they are shrines (*mashhad*s) endowed with special sanctity and *baraka* (blessing). A number of these *mashhad*s are pre-Fatimid, and some, such as those of Sayyida Zaynab and Sayyida Nafisa, have subsequently evolved into the most sacred mosque complexes in Cairo. Sayyida Zaynab (d. 680) and Sayyida Nafisa (d. 824) were descendants of the Prophet through Fatima and Ali. The former was the daughter of Fatima and Ali, and the latter the great-granddaughter of Ali's son, Hasan. She was a close friend of the legist Imam al-Shafi'i. Both of these saints are revered by Sunni and Shi'ite Muslims in equal measure. Jonathan Bloom suggests that the funerary cults of saints descended from Ali, like these, might well have been established by Isma'ili missionaries some time before the Fatimid conquest. Because of the secret nature of their mission, the Isma'ilis directed their activites in Egypt not towards the public domain of the mosque, but in private houses and among the less

formal religious gatherings found at the tombs. Bloom also suggests that the veneration of female saints owes much to the influence of women in the cemeteries. Women, since Pharaonic times, had always played a key role in funeral lamentations, but more significantly, the cemeteries allowed women a more informal approach to devotional worship – something denied to them in the male-dominated domain of the mosque. Their presence in the tombs and shrines of the Southern Cemetery is still manifest today.[19]

The mosque complexes of Sayyida Zaynab and Sayyida Nafisa (as well as the more important *mashhad* and mosque of Sayyidna al-Husain) now date mainly from Ottoman times, and for this reason they fall outside the scope of this book. However, a number of significant Alid tombs and *mashhad*s (shrines or mausoleums of saints and martyrs) were built and restored during the Fatimid period, the most impressive being that of Sayyida Ruqayya. She was another daughter of Ali (but not by Fatima), who, according to one tradition, came to Egypt with her step-sister Sayyida Zaynab. Inscriptions on the cenotaph identify it as her tomb, but other traditions, acknowledging Damascus as her burial place, suggest that this is a *mashhad* rather than a tomb, built in response to a vision as a memorial to the saint. This latter explanation is probably more likely, for as Caroline Williams has pointed out, divine intervention in the form of dreams, visions and miracles frequently provided the pretext for building *mashhad*s.[20] Sayyida Ruqayya's *mashhad* (1133–53) consists of a rectangular sanctuary divided into three bays with a ribbed dome surmounting an octagonal zone of transition over the centre. Its most distinctive features are the three stucco *mihrab*s in the *qibla* wall. The principal *mihrab* is a masterpiece of stucco design and recalls the fluted hood at the centre of al-Aqmar's mosque façade. However, the design here gives more emphasis to a bold crystalline arrangement of *muqarnas* framing a hood that is deeply hollowed with sixteen flutes radiating from a central medallion containing the names of Ali and Muhammad carved in interlocking patterns of Kufic.

An earlier cluster of seven *mashhad*s was restored in 1122 by the vizier Ma'mun al-Batah'ihi. Among these are the conjoined tombs of Muhammad al-Jafari and Sayyida Atika. Both have cubic chambers covered with domes with keel-arched profiles, but al-Jafari's dome is plain, while Sayyida Atika's is ribbed on the outside, making it possibly the earliest dome of this type in Cairo. Muhammad al-Jafari was the son of the sixth imam, Ja'far al Sadiq, and Sayyida Atika, described as an aunt of the Prophet, married and outlived four distinguished Companions of the Prophet, including the caliph Omar.



ABOVE: *Mashhad* of Sayyida Ruqayya.

A later tomb of another female saint is that of Umm Kulthum (d. 868), a descendant of Ali through his son al-Husain. Her tomb also includes the graves of the al-Tabatati family – a family of Alid descent who played a prominent part in receiving the imam-caliph al-Mu'izz, in 971. Today's structure is mainly modern, but the original *mihrab*, with its fluted conch-like hood and delicate patterned recess containing the names of Muhammad and Ali, has survived. Umm Kulthum was the sister of Yahya al-Shabih whose *mashhad,* built nearby (c. 1145), also contains the tomb of his brother Abd Allah. This has a ribbed dome, similar to Sayyida Ruqayya's, placed over a central space connected to an ambulatory on three sides. The *qibla* wall has three *mihrab*s, of which the central, with its ribbed hood framed with *muqarnas*, is surmounted by a small dome.[21]

Undoubtedly the most sacred of the *mashhad*s is that of Sayyidna al-Husain (Ali's son), which contains the relic of al-Husain's head. Tradition has it that after his martyrdom at the battle of Karbala in 680, his severed head was taken to Ascalon in Palestine and buried.[22] It was later discovered by either the vizier Badr al-Jamali or his son al-Afdal. According to the scholar Ibn Muyassar (d. 1122), it was al-Afdal, following his capture of Jerusalem in 1098, who discovered the head and built a *mashhad* to house it. Ascalon was by that time the last significant Fatimid possession in Palestine. It was later captured in 1153 by the Crusaders led by Baldwin III of Jerusalem, but before the city capitulated the relic was rescued and taken to Cairo for safekeeping. The relic, like the bodies of the Fatimid imam-caliphs, was buried in the the royal palace, but according to al-Maqrizi, the vizier al-Salih Tala'i later requested permission to house it in his new mosque situated outside the Fatimid walls opposite the Bab Zuwaila. His request, which was fiercely opposed by the women of the court, was refused by the child imam-caliph, al-Fa'iz, and a *mashhad* was built for it in the palace precincts. It was here that it remained sacred to both Shi'ite and Sunni Muslims, even during the reign of Salah al-Din who so resolutely tried to eradicate all traces of Isma'ili culture and influence. One of Salah al-Din's contemporaries, the traveller Ibn Jubayr (1144–1217), records the veneration and lamentations at the *mashhad* during his visit to Cairo between 1182 and 1185.

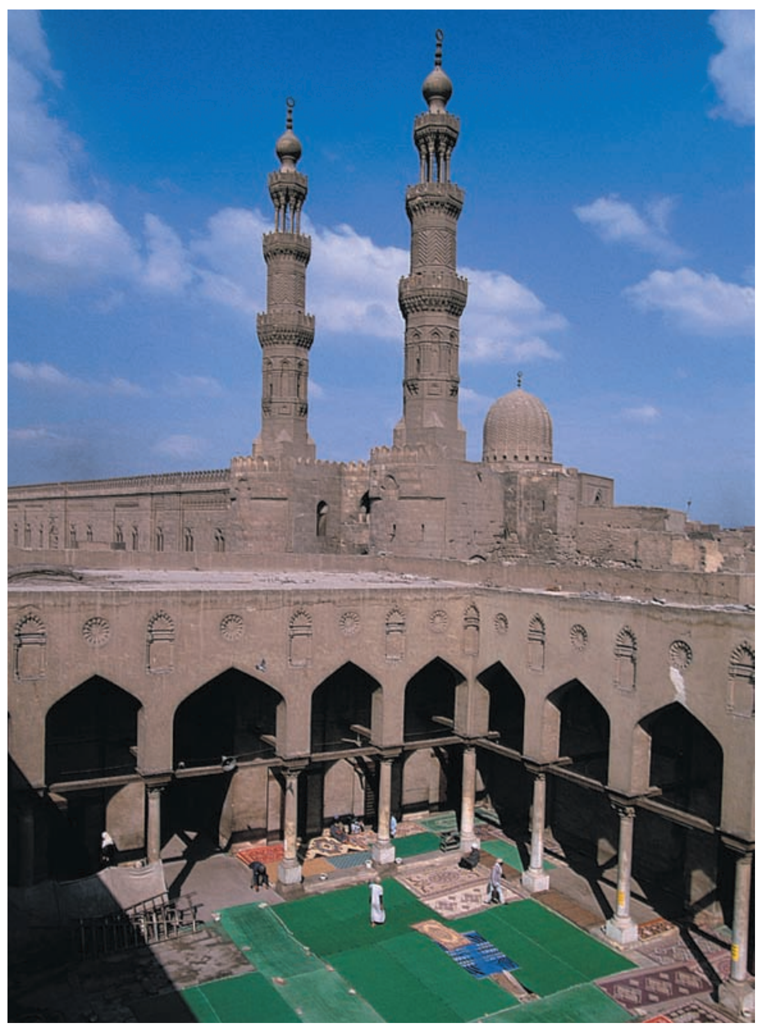
> We observed men kissing the blessed tomb, surrounding it, throwing themselves upon it, smoothing with their hands the *kiswa* that was over it, moving round in a surging throng, calling

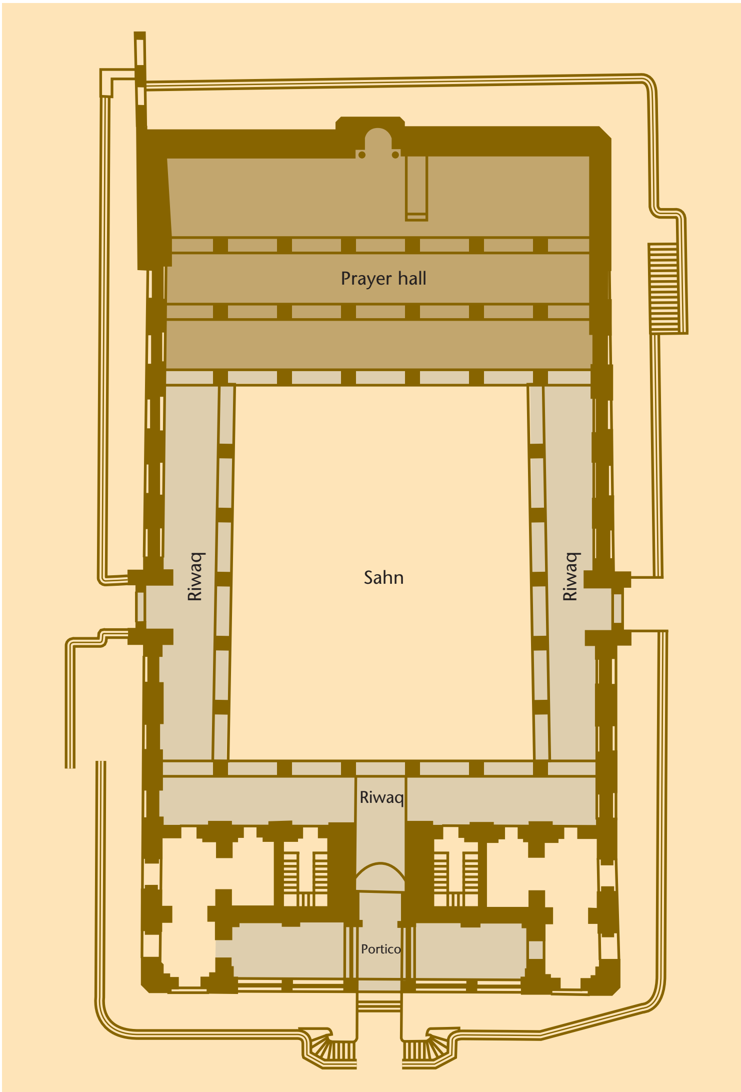
> out invocations, weeping and entreating Glorious God to bless the hallowed dust, and offering up humble supplications such as would melt the hearts and split the hardest flint. A solemn thing it was and an awe-inspiring sight.[23]

The present nineteenth-century mosque of Sayyidna al-Husain is located on the palace site where the original *mashhad* stood.

Vizier al-Salih Tala'i was summoned to Cairo to establish order during the turbulence that followed the assassination of the imam-caliph al-Zafar. The last two imam-caliphs acceded to the throne as children and effective political control was exercised by competing viziers until the end of the Fatimid period. Al-Salih Tala'i proved to be an able vizier, a distinguished poet and a great patron of the arts. His new mosque was completed despite his failure to house the relic of Husain's head. It is a rectangular free-standing structure built on shops that are now exposed below street level by excavations. The entrance on the north-west side is approached by steps, and the façade has the unique feature of an open arcaded portico consisting of five keel-arches springing from antique Corinthian columns. Flanking this portico, the solid masonry at the corners of the façade is relieved by tall, blind recesses with fluted keel-arched hoods and iron window grilles at the base. This section of solid masonry conceals two rooms on either side of the portico. The ceiling of the portico is the original Fatimid fabric and the intricate wooden *mashrabiyya* screen, set between the bases of the columns, is a modern copy of the medieval woodwork that originally filled the arcades of the *qibla riwaq* (in similar fashion to that seen in the al-Maridani mosque). The other exterior walls are solid masonry relieved on the north-west and south-west sides by central side entrances and repeated keel-arched recesses with iron window grilles (occasionally bricked in) level with the ground of the mosque interior.

BELOW: Mosque of al-Salih Tala'i.





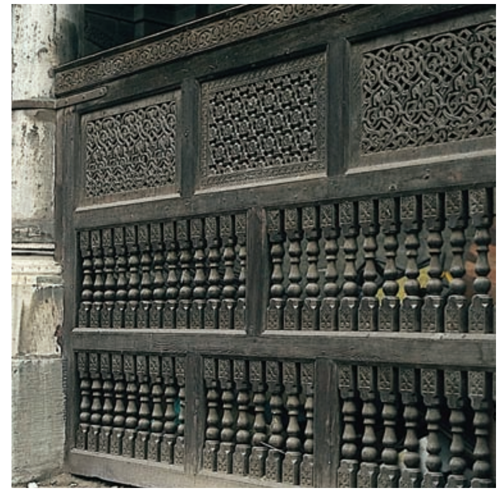
ABOVE: Plan of the mosque of al-Salih Tala'i.

Originally the arcaded portico in the north-west façade stood in place of a north-west *riwaq*, but when the mosque was restored at the beginning of the twentieth century a north-west *riwaq* was built inside the mosque in the mistaken belief that this formed a part of the original design. The *sahn* now has three *riwaq*s, one aisle in width, and the prayer hall is three aisles deep. Fragments of the original decoration have been incorporated in subsequent restorations and the general character of the interior resembles the al-Aqmar mosque on a larger scale. Bands of Kufic frame the keel-arches of the arcades, and the antique columns, held together by elaborately carved tie-beams, are extremely fine, with intricately drilled Corinthian capitals. The spandrels of the arches facing the *sahn* have blind niches with fluted hoods and above the apex of the keel-arches are deeply cut fluted rosettes. Inside the prayer hall the Kufic decoration outlining the arches is particularly fine and the spandrels of the arches are filled with richly carved medallions. The *qibla* wall is pierced by seven window grilles, some of which are original, and one of which, near the *mihrab*, displays the earliest inscription in the cursive Naskhi script. The wooden *minbar* with geometric decoration and *mashrabiyya* work (woodwork made of small pieces of turned wood) is one of the oldest in Egypt and was presented by the amir Baktimur al-Juqander in 1299.

Vizier al-Salih Tala'i was the last person to hold the crumbling fabric of the Fatimid regime together and despite the loss of Jerusalem and Ascalon he achieved some success in defeating the Crusaders in Gaza and Hebron (1158). Unfortunately his firm rule was short-lived and he was poisoned by the aunt of the imam-caliph, who resented his growing power and influence. With his death there followed a power struggle between two rival viziers and Egypt became increasingly vulnerable to the predatory Crusaders. The Franks had created a string of small kingdoms forming a buffer between Shi'ite

Egypt and Sunni territory ruled by Seljuk Turks. The Frankish occupation of the Levant had been facilitated by a total lack of cohesion among the Muslims due to the bitter enmity between the Sunni Seljuk principalities and the Shi'ite Fatimids. Despite this, a confident Muslim counter-attack began under the leadership of Zangi, the atabeg of Mosul, who captured Edessa from the Franks and consolidated Muslim power in Mesopotamia and Syria. He was succeeded by his son Nur al-Din, who kept up the Muslim offensive with the help of his general, Shirkuh, and Shirkuh's young nephew, Salah al-Din (Saladin). Vizier al-Salih Tala'i had been one of the first to recognize that the defence of the Muslim nation rested on a common Muslim front, putting aside the divisions between Sunnis and Shi'ites, but his attempt at forming an alliance with Nur al-Din was unsuccessful. The over-cautious Nur al-Din was reluctant to come to the aid of a long detested Shi'ite adversary, and he also recognized, along with the Franks, that the enfeebled Fatimid regime was ready for plucking.

Shawar, the Arab governor of Upper Egypt, succeeded al-Salih Tala'i, but he was soon driven out of office by the popular commander, Dirgham, who had made his reputation campaigning against the Crusaders in Gaza. Shawar fled to Damascus and sought the help of Nur al-Din who agreed to support him with an army led by Shirkuh in return for an agreed sum amounting to one third of Egypt's revenues. In 1164 Shawar, Shirkuh and Salah al-Din marched on Egypt where Dirgham was defeated and killed. Shawar was restored to power, but he held that office under the protection of Shirkuh and resented the hold his allies had on Egypt. He refused to pay the agreed revenues and when Shirkuh put pressure on him by deploying Salah al-Din's forces in Egypt's eastern provinces, Shawar sought an alliance and made a treaty with Amalric, the King of Jerusalem, in 1167. Shawar's diplomatic duplicity did not pay off; relations with Amalric soon broke down and the Franks invaded Egypt, captured Bilbays, massacred the population (including the Copts) and laid siege to Cairo. As a consequence of this action Shirkuh intervened and marched on Cairo, forcing the withdrawal of the Franks to Palestine. Shawar was assassinated and Shirkuh assumed the office of vizier at the invitation of the imam-caliph al-Adid, although he still remained in the service of Nur al-Din. When Shirkuh died two months later Salah al-Din replaced him as ruler of Egypt. In 1171 al-Adid died and Salah al-Din abolished the Fatimid caliphate and restored Sunni orthodoxy to Egypt.[24]



ABOVE: *Mashrabiyya* screen in the mosque of Salih Tala'i.

Chapter Three

The Decorative Arts of the Tulunids and Fatimids

Tulunid Woodwork

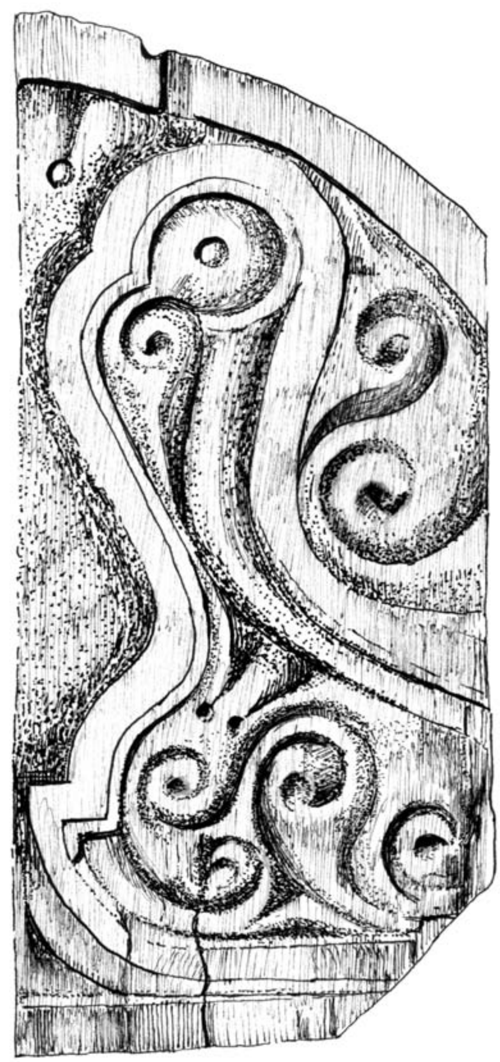
Due to the dry climate of Egypt, woodwork has been well preserved since Umayyad times, and because of its scarcity it has been valued as a precious commodity. The earliest fragments of wood date from the seventh century and show Coptic influence in the design of trefoil leafed vine-scrolls framing birds and lions. An eighth-century fragment in the Museum of Islamic Art, Cairo, displays a vine tendril emerging from a vase laden with grapes. It is a motif well established in early Umayyad art, manifest in the mosaics of the Dome of the Rock, and in similar wooden panels applied to the roof beams of the al-Aqsa mosque in Jerusalem (715). All these works belong to the Hellenistic ornamental tradition which still flourished in western Islam, the survival of which we have already observed in the timber fragments of Amr's mosque. During the Tulunid period a significant change of style occurred with the appearance of Eastern motifs and the adoption of the bevelled style of Samarra C. Persian influence is clearly revealed in a ninth-century teak frieze in the Museum of Islamic Art, Cairo. In this item, found in the Southern Cemetery, self-contained panels of arabesque are adorned intermittently with Sassanian crowns made up of a circular diadem set between two upheld wings.

Such an overt use of Persian symbolism is unusual, and more typical of Eastern influence is the general impact of Samarra style C on Tulunid woodwork. Wooden fragments from Samarra in the bevelled style have survived, most notably the wooden door now displayed in the Metropolitan Museum, New York. Among the earliest surviving

wooden fragments of this period in Cairo are the door soffits found in Ibn Tulun's mosque. The decorative scheme of the mosque as a whole, derived almost exclusively from Samarra style B, was expressed in stucco, but these wooden soffits represent a significant exception and they bear a striking resemblance to the wooden panels excavated in the throne room of the Jausaq al-Khaqani palace at Samarra (836–9). They display panels and borders covered with linear motifs suggestive of spear heads, heart-shaped palmettes, vases, volutes and leaves. They are arranged on the surface and the composition is emphatically style C, but the carving is shallow and they lack the deeper, incisive slanting cuts that characterize the distinctive bevelled style of later Tulunid woodwork.

Examples of this can be seen in the Museum of Islamic Art, Cairo, which contains a number of important late ninth-century wooden panels. They demonstrate the development of a strange fusion of decorative and representational elements. The purpose of these panels is uncertain, but it is likely that they belonged to the secular rather than religious domain. In one panel there is a shallow carved frieze showing decorative scrollwork with leaves and palmettes under a band of Kufic. The calligraphy reads 'blessing and good fortune to its owner', a sentiment typical of the kind inscribed on numerous items of decorative art across the whole Muslim world, particularly pottery. Another frieze depicts two confronted doves separated by a palmette and surrounded by a convoluted background of volutes and wing-like vegetal forms. The collared doves are clearly representational but the background is an ambiguous fusion of abstracted vegetal elements. Other panels in the museum are more inventive, suggesting birds and leaves ambiguously spiralling into semi-abstract designs. Figure and ground are one and the competing surfaces claim the same contour.

One panel in the Louvre Museum, Paris, suggests a long-necked bird with a leaf in its beak, rising like a phoenix from the swirl of volutes at its base. This particular bird motif goes back to Sassanian Persia, but here the level of abstraction has carried the design a long way from its ancient roots. Its sinuosity and asymmetry recalls Art Nouveau. In the Museum of Islamic Art, Cairo, two similar birds, more symmetrically arranged, back to back, are divided by a centrally placed palmette. Another bird-like panel can be found in the Metropolitan Museum of Art in New York. It has a tall rectangular format suggesting a double-headed bird with tail feathers. It looks like an embryonic design for the double-headed eagles which later appear in Persian embroidery,



ABOVE: Example of wooden panel, ninth or tenth century.

although its form may equally derive from a vase or leaf. The ambiguity of these forms is very powerful, and without wishing to impose too much of a twenty-first-century viewpoint, they are a reminder of more recent examples of metamorphosis in the works of surrealist artists like Max Ernst. A similar metamorphosis and ambiguity appears in Abbasid pottery of approximately the same date.

Tulunid Pottery

Pottery in the Samarra C style was exported from Iraq and it turns up all over the Muslim world. It can be seen in a splendid ninth- or early tenth-century bowl from Iraq in the David Collection, Copenhagen. Here a varied but tightly arranged design of interlocking palmettes painted in gold lustre is beautifully resolved within its circular format. A similar strength of design can be seen in the interlocking palmettes of a lustre bowl found in Persia and now displayed in the Iran Bastan Museum in Tehran. Ibn Tulun encouraged the import of large amounts of Abbasid pottery into Fustat and a number of Iraqi potters settled in Egypt and vice versa. Luxury goods followed the trade routes and it is possible that craftsmen travelled with them, eventually settling and disseminating new techniques and designs. For this reason precise classification of bronze, glass, textiles and pottery according to region is not always appropriate or relevant. The discovery of such artifacts in a given place is no indication that they were made there. Without archaeological evidence of kilns, there is absolutely no certainty that 'Samarra' ware found in Samarra was actually produced there. Centres of production can be identified, but these may not necessarily be synonymous with a regional style. Of the foreign imports into Fustat, the most important was lustre ware from Iraq. With its brilliant metallic sheen, this luxury product was particularly desirable because it provided an acceptable substitute for gold and silver plate. It involved a revolutionary technique which was to have a far-reaching impact on Islamic art, influencing future aspects of architectural design as well as ceramics.

Lustre painting involved the use of a pigment made up of a compound of sulphur and silver, copper or other metallic oxides. The pigment was mixed with red or yellow ochre and painted on an opaque white tin-glazed surface that had already been fired. The pot was then fired again at a lower temperature in a reducing kiln. If the pigment was thin, the result would be a lustrous, metallic and iridescent surface. Thick pigment would produce a bright copper or greenish-gold finish.[1] The origins of the technique almost certainly lie in Egypt

where it was developed in glass making as early as the sixth and seventh centuries. After the Muslim conquest, the earliest surviving piece of lustre glass, bearing the name of the Egyptian governor Abd al-Samad ibn Ali, dates from the eighth century. This technique was quickly adapted to ceramic design in Iraq during the eighth century, but the earliest datable examples are found in the tiles adorning the *mihrab* of the Great Mosque of Qairawan in Tunisia (862–3). At first, lustre ware in Iraq imitated the moulded and embossed forms of gold, silver and copper ware. The clay was pressed into a mould and the embossed decoration, glazed in gold and other metallic colours, was frequently derived from Hellenistic and Sassanian designs.

Besides lustre ware, glazed moulded dishes were also produced in Egypt during this period, a technique that goes back to Roman times. The body clay in Egyptian ceramics is slightly coarser than similar work in Iraq and the brown, green and purple glazes differ. One example in the Victoria and Albert Museum, London, displays a familiar half palmette motif glazed in brown and green, and another piece in the same collection depicts a number of birds executed with remarkable detail and naturalism. It is possible that this moulded technique was exported to Iraq, and we know that later a number of Iraqi potters settled in Egypt. Some came at the invitation of Ibn Tulun, but it is thought that many came from southern Iraq following a slave rebellion that destroyed the city of Basra in the latter half of the ninth century. A deeply hollowed condiment dish with green and yellow lead glazes in the British Museum, London, has the inscription 'The work of Abu Nasr of Basra, in Egypt'. Another example of moulded ware, also in the British Museum, is a small lobed oval ninth-century bowl moulded with a central rosette, pine cones and herring-bone decoration. Its design is derived from Chinese Tang silverware and it represents an interesting and unusual instance of Chinese influence on moulded ceramics. More plentiful is a whole genre of ceramics that existed in Egypt right up to the eleventh century once thought to have been influenced by eighth-century Tang splashwares. These are characterized, like the ninth-century pottery of Iraq and Nishapur, by their splashed and mottled overrun glazes.[2]

Textiles in the Tulunid Period

In the field of textiles there is evidence of an emerging Islamic identity in woven and embroidered Kufic inscriptions known as *tiraz*. These consist of bands of honorific inscriptions woven in silk and

bearing the title of the ruling king or official, and were the products of government-controlled workshops. The earliest surviving Umayyad *tiraz* (seventh to mid-eighth centuries) was found in Egypt but made in a factory in Ifriqiya (Tunisia). This fragment is in the Victoria and Albert Museum, London, and was made for either Marwan I (684) or Marwan II (744–50). Above its narrow Kufic inscription are motifs of Sassanian origin consisting of pearl-beaded roundels containing bunches of grapes, rosettes, jewels and hearts. Also showing Sassanian influence is a ninth-century tapestry from the Bahnasa workshops of Upper Egypt in the Cleveland Museum of Art, Ohio. It is woven in linen and wool with arabesque borders, pearl-beaded roundels, heraldic birds and a Kufic band which reads, 'In the name of Allah, blessing from Allah to its owner. Of what was made in the *tiraz* of ...'

In the Victoria and Albert Museum is an important piece of Tulunid *tiraz* dating from 895 bearing a crimson inscription embroidered in silk. The inscription reads 'Allah, Abu al-Abas al-Mu'tadid bi'llah, Commander of the faithful. May God fulfil for him that which he commands in the season of the year 282.' The acknowledgement of the Abbasid caliph Mu'tadid is significant,



ABOVE: The 'Marwan' silk: seventh to mid-eighth century (Victoria & Albert Museum).

because this *tiraz* was woven in the year that Khumarawaih's daughter, Qatr al-Nada, married the caliph, thus reconciling the divisions and forging closer diplomatic and dynastic links between the Tulunids and the Abbasid caliphate.[3] Also referring to the caliph Mu'tadid is a fragment of *tiraz* in the Newberry Collection in the Ashmolean Museum, Oxford. It is dated 901 and has an embroidered Kufic inscription in red silk on a linen background.

It reads, 'In the name of God. Praise be to God. The favour of God to the servant of God, Abu'l-Abbas, the Imam, al-Mu'tadid b'illah, Commander of the faithful, may God strengthen him. This is what he ordered, may God glorify him, to be made in the workshop of Tinnis, at the hands of Ubaid Allah, son of Sulaiman, in the year 288 [AD 901]. Peace. Harun, son of Khumarawaih, client of the Commander of the Faithful.' Harun succeeded Khumarawaih as governor of Egypt but was assassinated in 905. This fragment came from a garment which was eventually used as a burial shroud found in a grave in the cemetery of Atfah.[4]

Many other surviving fragments of textiles from the Umayyad and Tulunid periods in Egypt belong essentially to the late Hellenistic and Coptic tradition. As already noted, before the Muslim conquest Egypt's textiles were sold throughout the Byzantine empire and exported to Arabia. The main centres of production outside Alexandria were Tinnis (where 5,000 looms operated), Tuna, Fayyum and Damietta. The industry continued under Muslim rule, and there are surviving examples in the pure Coptic style, such as the splendid woollen tunic (eighth to ninth centuries) in the Whitworth Art Gallery, Manchester. Another example is an eighth-century linen and wool sleeve band in the Victoria and Albert Museum decorated in wool with hares and lions in the Coptic style. Wool was the preferred decorative material in Coptic textiles whereas silk, often with gold and silver threads, developed as the principal material for decorative *tiraz* bands. However, there are some surviving examples of Coptic woven silks with Kufic inscriptions, dating from the eighth and ninth centuries, found in the graves of Arkmim in Upper Egypt. One such fabric in the Victoria and Albert Museum is a silk trimming for a tunic displaying running figures, trees, birds, vases and a cornucopia. Apart from the Kufic inscription, its design is essentially Coptic and belongs to a long cultural tradition that is rich, complex and diverse. It is a tradition that reveals not just the mainstream of late Hellenistic art, but Christian symbolism, classical revivalism, folk traditions and Persian influence.

Greek and Coptic weaving provides an interesting visual correspondence to the events described in the first chapter. Just as pagan beliefs and customs were subsumed into early Christianity, so classical motifs were handed down and incorporated into Coptic weaving. River gods, Nereids, sirens, dancing girls, naked Bacchantes and satyrs all appear on the borders of Coptic textiles. Some textiles are more precisely Greek than Coptic, and tapestries depicting Orpheus, Eros, Dionysus, Ariadne, Gaea (goddess of the earth) and Hesta Polyolbos (goddess of the hearth) show the persistence of paganism well into the Christian era. Following the Persian occupation and the early victories of Heraclius, Sassanian motifs enter Coptic art as hunting scenes and horsebacked riders with bows and lances. Ancient oriental images of the emperor warrior slaying the serpent were absorbed into Christian iconography and transformed into St George and St Michael. Other Eastern symbols, such as the tree of life, were assimilated, and the ubiquitous classical vine-scroll, with the help of St John the Evangelist, became a powerful Christian symbol: 'I am the true vine, and my Father is the husbandman. Every branch in me that beareth not fruit he taketh away, he purgeth it, that it may bring forth more fruit. (John 15:1–2) Old and New Testament subjects appear, sometimes in very classical guises, such as Samson slaying the lion. Other beasts are depicted, such as leopards, hares, goats, panthers, camels, antelopes, bulls, birds and gryphons. The visual vocabulary of the Greek and Coptic weavers is immensely rich and varied and variations of these themes resurface in the courtly art of the Fatimids.

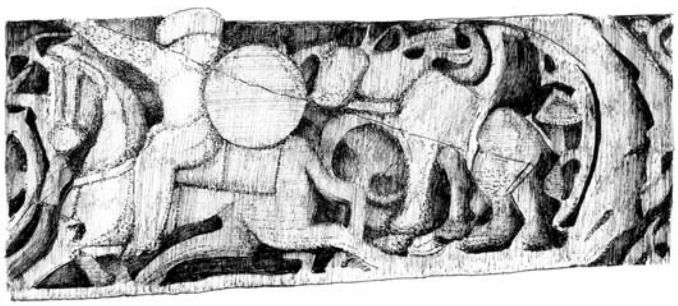
Fatimid Woodwork and Ivory

Sunni historians have been somewhat churlish in their appraisal of Fatimid achievements, and Shi'ite Islam has often been represented, particularly in the West, as extremist and intolerant. If this latter claim were true then the creative spirit would have been absent in such an oppressive climate. However, the visual and historical evidence of Fatimid culture tells a very different story. It is one in which the arts flourished across all the disciplines and a lively figurative style emerged despite the *sharia*'s prohibition on human and animal representation. Iconoclasm operated only in the domain of the mosque, and not in the court, which largely determined the ethos and content of the arts. It is a paradox that despite the religious nature of the Fatimid regime, a worldly and sumptuous art emerged in a court that was essentially a sacred domain. An imperial court, its art expressed the regime's relaxed confidence and

sense of legitimacy in the wake of its great dynastic predecessors. Fatimid art expresses a spirit of continuity with the past, drawing on subject matter already observed in Coptic art and that of the Umayyad, Abbasid and Tulunid courts. The themes of leisure, entertainment and royal amusements pervade all the decorative arts. Woodwork, textiles, ivories and ceramics are embellished with scenes of hunting, falconry, cock fighting and wrestling and populated with musicians, dancers, acrobats, wine-drinkers, cup-bearers, seated potentates and languid reclining figures. None of this hedonistic subject matter expresses a regime motivated by a spirit of religious intolerance.

The plunder which destroyed the library of Dar al-Ilm during the reign of al-Mustansir (1068) also emptied the treasury of its precious artifacts. According to Oleg Grabar, in addition to the normal treasury commodities of gold, silver, rock crystal, silks and ivory, other items included 'ceremonial tents, Chinese ceramics, weapons and miniature gardens with trees, animals, rivers and boats of gold, silver and other precious materials'.[5] Countless works of art were destroyed, and we can only experience a glimmer of the palace's magnificence by piecing together those precious few fragments that remain. The palace itself was destroyed by Salah al-Din, but some of its original woodwork dating from the eleventh century was later recycled and used in the mosque and *maristan* (hospital) of Sultan Qala'un (1284–5), built on the site of the Dar al-Qutbiyya palace. These wooden panels are rich in figurative detail, but when they were placed in Qala'un's *maristan*, iconoclast orthodoxy prevailed and the figurative elements were concealed by installing the panels facing the wall. The subject matter of these panels was typical of contemporary court art across the Muslim world, although the Fatimids brought their own touch of realism. These long horizontal panels show human and animal subjects placed in quatrefoils, cartouches and lozenges against a background of spiralling arabesque. Many of the heraldic and mythical creatures, such as winged harpies, centaurs, unicorns and peacocks, have their roots in the art of ancient Mesopotamia. Gazelles browse at the tree of life, and the ubiquitous hare, already encountered in the borders of Coptic textiles, reappears among a menagerie of exotic beasts and birds. Among the scenes of huntsmen, dancers, flute-players, drummers and carousing wine-drinkers, there are touches of realism, such as the vignette depicting a woman peering between the curtains of a palanquin mounted on a camel. All these panels were originally covered with a gesso ground and painted and gilded.

Elsewhere Fatimid woodwork reveals a period of transition between the organic bevelled style of Samarra and the geometric styles which were to emerge in the art of the Ayyubids and Mamluks. One interesting teak door panel in the Museum of Islamic Art, Cairo, shows a pair of back-to-back horses' heads, bridled and reined into a spiralling arabesque. Divided vertically by a palmette, the symmetry of these heads and the slanting cut of the design recall those Tulunid birds in the bevelled style. These horses, however, are treated with greater realism without losing their emblematic and heraldic character, and there is less ambiguity between figure and ground. They represent a transition towards a more deeply incised style of carving with greater clarity of structure in the organization of the arabesque. This can be seen in later Fatimid woodwork, such as the twelfth-century panel in the Seattle Art Museum, where the rhythmic tempo of the interlacing arabesque is elegantly resolved and contained within the regularity of its mathematical frame. The bevelled style, however, survived well into the early eleventh century, as we have observed in the scrolling volutes on the tie-beams of al-Hakim's mosque, and it appears again in similar volute patterns forming a part of the arabesque in the panels of a door (1010) bearing al-Hakim's name in the Museum of Islamic Art, Cairo.





TOP: Wooden panel from Western Palace: eleventh century.

ABOVE: Door panel: eleventh century.

With the exception of inscriptions, most of the decoration considered here, architectural or otherwise, has consisted in the main of various forms of arabesque, with or without figurative elements. So far the role of geometry has been fundamentally structural in that it contains, regulates and supports the decorative elements. Geometry provided the trellis for entwining arabesques and it ensured that figures and animals knew their place, subordinate to the decorative scheme of things. Geometrical shapes rarely formed the content of decoration, although sometimes they competed with arabesque in dominating the field of particular designs, such as those in the stucco arch soffits of the Ibn Tulun mosque. Elsewhere pure geometrical form played a very limited role confined to borders, lozenges, concave and convex panels, crenellation and so forth, but its appearance as the main content of decoration occurs magnificently in the wooden *mihrab* of the *mashhad* of Sayyida Ruqayya (1154–60), now in the Museum of Islamic Art, Cairo. Its broad shape and composition is similar to

that of the delicate stucco *mihrab* in the al-Juyushi mosque (1085), but here geometry replaces arabesque as the principal form of decoration. With the exception of the framing bands of Kufic and a horizontal arabesque panel, the whole surface is densely covered with a restless, dynamic network of stellar patterns, polygons and rectangles. Contained within these shapes are small panels of arabesque, but they are details, subordinate to a dominating geometrical ground. The pattern displays a system of infinite geometrical progression marking the beginning of a design format that becomes fundamental to the arts of the Ayyubids and Mamluks, particularly in the religious domain.

The figurative motifs in the woodwork of Qala'un's *maristan* find their parallel in contemporary ivory, and the stylistic and technical similarities of wood and ivory carving suggest that craftsmen may have worked in both mediums. Ivory carving reached its highest level of skill and sophistication in four decorative plaques shown in the Staatliche Museen Preussischer Kulturbesitz, Museum für Islamische Kunst, Berlin-Dahlem. They date from the eleventh or twelfth centuries, and form long vertical and horizontal openwork panels probably belonging to a casket or piece of furniture. The design consists of a scrolling grape vine entwining a frieze of figures and animals. The side panels contain musicians, wine-drinkers, grape harvesters and huntsmen alternating with pre-Islamic motifs depicting animals locked in combat: a lion attacking a bull and eagles sinking their talons into antelopes. The upper horizontal panel displays a pageant of falconers on horseback, and the lower features seated wine-drinkers, lute players and flautists. The ivory is carved with intricate detail, rendering the folds and embroidered surfaces of the costumes, the fur, feather and musculature of the animals, as well as the entwining grapes and leaves, with extraordinary three-dimensional realism.

A similar group of ivory plaques of the same period can be found in the Museo Nazionale del Bargello in Florence. A number of these scenes represent the *Labours of the Month*, and as Deborah Howard has pointed out, motifs like these probably influenced the rich stone carving in the main portal of St Mark's in Venice.[6] Likewise the popular image of the scarf dancer which first appeared in Islamic art in the frescoes of the Jausaq al-Khaqani palace in Samarra may have influenced the iconography of the fourteenth-century mosaic of Salome in the Baptistry of St Mark's. The scarf dancer may have older antecedents in the naked bacchantes on Coptic textiles or derive from eastern iconography, such as the dancing figure of the





TOP: Stone carving around the main portal of St Mark's, Venice.

ABOVE: 'Labours of the Months': eleventh-century ivory plaques (Bargello, Florence).

priestess Anahita seen in an Achaemenid silver vase in the Hermitage Museum, St Petersburg. The rhythmic structure of the figure is rendered through the swirling arabesques embroidered in her dress, the contours of her body, and the folds of drapery which long foreshadow the dynamics of Cubism and Futurism. It is an enduring motif in Islamic art and was absorbed elsewhere in the art of Byzantium, most noticeably, in two of the small panels in the eleventh-century gold and enamelled crown of Constantine IX Monomachus in the Magyar Nemzeti Muzeum, Budapest. Trade and cross-cultural links with Venice were strong and Fatimid merchandise and art was widely exported to the West. The origin of the ivories in Berlin and Florence was probably Sicily, where they were most likely either exported from Egypt or made by Fatimid artists in Sicily.

Fatimid Painting

Sicily came under Arab rule when the Aghlabid rulers of Tunisia occupied the country in 827. In 909 it was incorporated into the Fatimid empire and its culture flourished under the Kalbite dynasty until the Normans, led by Count Roger, invaded the island and finally wrested control from the Arabs in 1091. In Sicily Roger I encountered a superior Muslim culture which he adopted, encouraged and patronized with great enthusiasm. Under his patronage and that of his Arabophile successors, Sicily became a brilliant melting pot of Arab–Christian culture. It was a cultural collaboration in which the arts, sciences and philosophy flourished, and through their territorial hold on southern Italy, the Normans became the main transmitters of Muslim learning to Italy. The Latin, Greek and Arabic speaking people of Sicily imported the culture of Muslim Spain and translated and disseminated major works of Aristotle with Avicenna's commentaries, as well as other ancient works such as Ptolemy's *Almagest* and *Optica*. The Norman kings, described as 'baptised sultans', spoke Arabic, wore Muslim dress, appointed Muslim officials and in some cases formed their own harems.[7]



ABOVE: Feasting ruler: twelfth century (ceiling of the Cappella Palatina, Palermo).

The most interesting visual expression of this cultural union is the royal chapel in Palermo, the Cappella Palatina (1131–40), built for Roger II. The chapel has a basilican plan with nave and side aisles terminating in a triple-apsed sanctuary. Above the polychrome marble dado, all the walls, cupolas and arcades are covered with Byzantine mosaics executed by Greek craftsmen from Constantinople. The painted nave ceiling is the work of Arab

craftsmen, although their origin is uncertain. Details of style suggest they may have come from Iraq, but the content of the work and the broader features of design also point to Fatimid Egypt. Whether the artists themselves were Egyptian or not, the work as a whole provides the clearest indication of what contemporary Fatimid painting was like. Precious few examples survive in Egypt, the most notable being some eleventh-century stucco fragments painted on the *muqarnas* of a Fustat bath-house in the Museum of Islamic Art, Cairo. The Palermo ceiling is painted and gilded with ranks of *muqarnas* and a galaxy of star-like coffered polygons indented with shell-motifs. Each polygon is framed with a band of Kufic and the petal-like lobes of the shell are decorated with fine arabesques, figures and animals.

According to Richard Ettinghausen the text for the main theme of these paintings could be taken from an inscription on Roger II's robe, 'The pleasures of days and nights without surcease or change'.[8] The subject matter and style echoes the decorative art of the Fatimids, although the detail lacks the refinement of the ivories. There are feasts and banquets with enthroned potentates, slave-girls, scarf dancers, seated musicians and wine-drinkers, as well as standing shepherds, harvesters and labourers. Isolated figures, such as the shepherd carrying a ram on his shoulders and the labourer holding a barrel, are wreathed in arabesque like the Fatimid ivories. Tall date palms with twisted trunks stand and divide pairs of lute players and languid wine-drinkers, while elsewhere high-stepping camels proudly carry their riders and court ladies with due pomp and circumstance. The facets and corners of the *muqarnas* are filled with harpies and exotic birds, and in some instances heraldic birds and beasts reach new levels of stylization and abstraction. In the *Ascension Scene* there is, according to Ettinghausen, a 'royal apotheosis' set in the middle of a stylized eagle holding two antelopes in its talons.[9] The level of invention and abstraction recalls illuminated initials in contemporary Romanesque manuscripts.



ABOVE: Camel riders: twelfth century (ceiling of the Cappella Palatina, Palermo).

Fatimid Metalwork

One famous heraldic beast which has intrigued scholars for generations is the bronze gryphon in the Museo dell'Opera del Duomo in Pisa. It once stood as a trophy on the Duomo in Pisa, but where it came from originally has always been in doubt. It has been variously attributed to Spain, Sicily, Tunisia, Fatimid Egypt or Persia. According to Marilyn Jenkins, primary sources suggest that







TOP: Fatimid influenced motifs in the roundels on the façade of the Duomo at Lucca.

CENTRE: Detail of lustre bowl: eleventh century.

ABOVE: The gryphon of Pisa.

it was produced under the aegis of the Fatimids in either Egypt or Tunisia, but more recently Anna Contadini has cast doubt on this.[10] A Latin inscription on the façade of the Duomo (1063) describing the Pisan capture of Palermo explains how the booty raised paid for the initial building of the cathedral. Another source dating from 1088 (Marangonis) describes a Pisan and Genoese raid on the Tunisian coast resulting in the capture of Mahdiya and Zawila on St Sisto's day in 1087.[11] According to this account, the booty, including large cast bronze objects, was taken back to Pisa to embellish the churches, and the church of St Sisto was built in the old quarter of Pisa to celebrate this victory. It seems possible therefore that the Pisan gryphon was one of these large bronze objects.

As well as St Sisto, the evidence of church embellishment can be seen today in the Fatimid and Tunisian pottery cemented into the façades and cornices of several other twelfth-century Pisan churches, including St Andrea, St Zeno and St Silvestro. The iconography of Fatimid art, particularly the gryphon, is thus disseminated in subsequent decorative details in Tuscan Romanesque architecture, such as those seen in the façades of the Duomos at both Pisa and Lucca. The bronze gryphon, which originally stood proudly on a column above the Duomo, is a magnificent piece of bronze casting and engraving standing more than 100 centimetres high. The body of the beast was cast in one piece and the wings are rivetted on. According to Rachel Ward, it almost certainly supported a heavy object such as a candelabra or fountain.[12] If it were the latter, then several would have been cast, and the final ensemble might have resembled the famous fountain in the Court of the Lions in the Alhambra Palace, Granada. The surface is beautifully engraved with feathery motifs on the wings, neck and breast, and the saddlecloth is covered with circles bordered with Kufic inscriptions offering blessings to its owner. Adding to this heraldic splendour are lions and eagles engraved in the inverted pendants covering the shoulders, hips and thigh. The fine engraving subtly animates and enriches the surface without detracting from the beauty of its corpulent shape. The curvature of the wings finds a diminutive echo in its beak, and the shapes of the wattle and ears are inverted and repeated in the engraved decoration over the thighs. For theological reasons free-standing sculpture did not evolve strongly in the arts of Islam, but the Pisa gryphon can confidently stand on the world stage as a sculptural masterpiece.

A number of smaller bronzes were made as animal-shaped ewers known as aquamaniles. One of the most stylish, in

St Catherine's monastery, Sinai, is a cast bronze bird with engraved feathers and a handle in the form of a stylized animal. Such zoomorphic vessels have a long history going back to Sassanian times and this bird has two impressive antecedents, a bronze Persian incense burner in the Berlin-Dahlem Museum (eighth- to ninth-century) and a cast brass ewer from Iraq in the Hermitage Museum, St Petersburg (796–7). Small animal bronzes appear throughout the Fatimid period and one delightful example is a hollow cast bronze hare in the Museum of Islamic Art, Cairo. The hare was a symbol of fertility and good luck, and this example, with its flattened-back ears, recalls the hares that race the borders of Coptic textiles, but unlike those uniform creatures, this is full of sculptural energy and the animation packed into its small crouching form is quite extraordinary. A feature of many of these animals is the rich surface decoration, engraved or embossed, covering the form with a rich mantle of arabesque. Two exemplary pieces are a beautifully sculptured lion in the National Museum, Copenhagen, with an antelope in its mouth, and an eleventh-century ass covered with a vine-scroll and grapes in the Museum of Islamic Art, Cairo.



ABOVE: Crouched hare in cast bronze: eleventh century.

Among other creatures, cast bronze parrots of the Fatimid era are a feature of the Keir Collection in Ham, Richmond, England. Their function was uncertain until a lamp chain, using this motif, was acquired by the collection in 1977. In this intriguing object the chain passes through the parrot's body, and below is suspended an oval openwork bronze ball consisting of arabesques and medallions containing birds and animal forms. Similar designs were produced in Persia but the pseudo-hieroglyphs on the back of the parrot indicate its Egyptian provenence. Of a more utilitarian nature, two ewers in the same collection relate closely to traditional designs going back to pre-Islamic times. It is not clear whether these are Fatimid, and they could possibly date from the Tulunid or Ikhshidid periods. Their distinctive shape consists of a bulbous body tapering to a tall narrow neck, from which springs a flared and pointed mouth. The bodies stand on cylindrical feet, their necks are banded with ring collars and the rims of the ewers are capped with domical hinged lids. Angling sharply out from the base of these vessels are S-shaped handles with rectangular openwork boxes at their centres. The tops of the handles have thumb rests, one in the form of a lion, and the other being box-shaped with concave, dice-like circles punched into each side. There is a similar vessel in the British Museum, found in a Coptic monastery (ninth to eleventh century), with an antelope-shaped thumb rest.

Fatimid Pottery

The hedonistic spirit of the Fatimid period is expressed in lustre-painted pottery more than in any other art form. Moreover it is through this medium that we can best recapture the vitality of Fatimid painting. Those precious few eleventh-century fragments of painting taken from a Fustat bath-house in the Museum of Islamic Art, Cairo, demonstrate a linear style which finds its parallel in ceramics. Among the bath-house paintings is a seated turbanned man holding a goblet and wearing a costume patterned with rosettes. It is painted with enormous assurance and control and the subject and style, down to the rosette details of costume, bear a striking similarity to some of the figures on the ceiling of the Cappella Palatina. The bath-house painting shows a beautifully composed haloed head with a tightly drawn turban on a broad round face in which the features are executed with economy and elegance. The quality of this painting is echoed in a lustre dish, also in the Museum of Islamic Art, Cairo, portraying a lady playing a lute. Her head is drawn with the same sophistication and the whole design is distinguished by its refinement of composition and acute observation. The hands are drawn with fluent precision and the shape of the right one irregularly repeats in inverted form the containing shape of the lute. The costume is decorated with rosettes

BELOW: Bath-house painting from Fustat: eleventh century (Museum of Islamic Art, Cairo).



and to her left is a bottle-shaped flask typical of the metal ewers of the Fatimid period.

The negative space between the lute player and the rim is filled with irregular shapes of tightly scrolled spirals. These became a typical decorative convention in Fatimid ceramic art and appear to be an abstracted form of vine-scroll. They ornament the edge of another dish in the Museum of Islamic Art, Cairo, depicting a seated woman wearing a crown and holding two wine beakers. This figure is more emblematic in character and there is less anatomical sophistication, but there is a lively surface pattern dominated by heart-shaped palmette scrolls decorating her dress. Her hairstyle with curling side locks and long plaits represents a figurative convention appearing in a number of ceramic pieces and stylistically relates to the early figure paintings of Samarra. Curls on the forehead and in the side locks also appear in male portraits and can be seen in the fragments of another dish in the Museum of Islamic Art, Cairo, showing a richly clad languid figure pouring wine into a beaker. The ease and linear fluency of this image recalls the red-figure vase painting of Greece in the fourth century BC.

Among the company of wine-drinkers and musicians in Fatimid art, the familiar scarf dancer turns up in a ceramic dish in the Freer Gallery of Art, Washington. Flanked by wine flasks and surrounded by spiralling scrollwork, she holds a pose which can best be described as one of genuflexion, a stylized convention for movement adopted in a number of figurative motifs across the arts. Her awkward posture contrasts with the realism and expression displayed in the fragments of a bowl depicting two wrestlers in the Museum of Islamic Art, Cairo. The painting shows white figures against a golden-brown lustre background drawn with remarkable linear precision, depicting not just the bearded protagonists stripped to the waist, but also the animated arm and hand gestures of a number of excited spectators. A similar lively scene of cock-fighting is displayed on a monochrome lustre-painted dish in the Keir Collection, Richmond. Two figures, representing a man and woman, look at each other in a spirit of confrontation as they clutch and restrain their birds before the contest. Also in the Keir Collection another note of realism can be seen in a bowl representing a labourer with a basket strapped to his back.

In a more pious mood, a number of works were made for Christian clients. In the Victoria and Albert Museum, London, there is a lustre bowl depicting a Coptic priest in an elaborate gown decorated with spirals, carrying a lamp or thurible at arm's length. On the left-hand side is a motif that has been interpreted as either





TOP: Monochrome lustre dish with reclining lady: eleventh to twelfth century.

ABOVE: Monochrome lustre dish with scarf dancer (Freer Galley of Art).





ABOVE: Lustre bowl showing Coptic priest: eleventh century (Victoria & Albert Museum).
ABOVE RIGHT: Lustre bowl with deer: eleventh century (Cleveland Museum of Art).

a cypress tree or an *ankh* – the ancient Egyptian symbol for the key of life which was later absorbed into the repertoire of Coptic art. Another object in the Victoria and Albert Museum with possible Christian connotations is a jar decorated with bands of interlaced ribbons, heart-shaped palmettes and stylized fish encircling its shoulder. The fish, a common motif in Coptic textiles, may well be a Christian symbol.[13] Less ambiguous in meaning is a dish in the Museum of Islamic Art, Cairo, portraying a striking image of Christ holding up his hand in the gesture of benediction.

The quality of figurative representation is what makes Fatimid ceramics so distinctive, but some of the most elegant and accomplished designs feature animals. Many mythological beasts, such as gryphons and harpies, are treated with decorative panache, but it is the grace and naturalism that distinguish more familiar animals. In the Cleveland Museum of Art there is a bowl displaying a magnificent deer with a foliate spray in its mouth. It is a triumph of decorative refinement fused with naturalism. The dark, flat silhouette of the animal is set against an opaque, white glazed ground broken by a few white flourishes which anatomically mould the form with great economy of means. Irregular panels of spiralling scrollwork appear in the negative spaces between the legs and above the back, and a loose garland of leaves rhythmically dances around the circumference. A similar prancing stag forms a masterly design on a bowl in the Museum of Islamic Art, Cairo. Its dark silhouette is

broken by a spotted white underbelly and flank, and the musculature of the beast is simply rendered by stylized cross-hatching on the shoulder. The head of the animal is thrown back, and from the antlers sprout spiralling vine-scrolls encircling the form with heart-shaped leaves. It was designs like these that profoundly influenced the ceramicist William de Morgan who spearheaded the revival of lustre ware in nineteenth-century Britain.

Many of the creatures depicted on the ceramics – gryphons, cheetahs, hares, birds and stags – have foliate sprays or leaves issuing from their mouths. This decorative device has its origin in pre-Islamic Middle Eastern art and abstracted derivations of it appear in those bevelled bird-shaped Tulunid wood carvings. The legacy of the Samarra style C can still be seen in earlier Fatimid pottery where palmettes, leaves and stylized foliate forms are designed with sophisticated ambiguity. In Tulunid wood carving the figure and ground interpenetrate and fuse, whereas in early Fatimid ceramics they reach a state of ambiguous equilibrium. These designs are tightly organized so that there is an equation between positive and negative shapes, with the eye alternately perceiving one or other as the dominant form. Solidly painted shapes alternate with linear patterns, and certain motifs, such as heart-shaped palmettes, begin to emerge as distinctive features of Fatimid art. A good example of this style can be seen in a monochrome lustre painted jar in the Benaki Museum, Athens.

Most of these early designs are pure arabesque and in general calligraphy as a dominant motif played a less significant role in Fatimid pottery. One of the most elegant of inscriptions, conferring favour, prosperity and safety on its owner, decorates the rim of a bowl depicting a falconer in the Freer Gallery of Art, Washington. Here the calligraphy is subordinate to the central design, but there are a number of notable examples where calligraphy takes centre stage. In the Museum of Islamic Art, Cairo, there is a beautiful eleventh-century lustre bowl with heart-shaped palmettes at its centre, surrounded by an immaculate Kufic inscription bestowing 'complete favour and perfect blessing' on its owner. Three bowls in the Keir Collection, Richmond, display striking examples of calligraphy. One shows a white silhouetted ram at the centre with a flawless floriated Kufic inscription wreathed with heart-shaped leaf-scrolls around the side. Another shows a fusion of calligraphy and decoration with floriate scrolls sprouting from the central letters of a repeated inscription. In terms of technique and design, the third bowl is less accomplished, but there is an animated





TOP: From eleventh-century dish.

ABOVE: Fortune-bearing hare with palm in its mouth: from eleventh-century dish.



ABOVE: Detail of eleventh/twelfth century bowl.

BELOW: Water jar with filter: eleventh century (Victoria & Albert Museum).



spirit in the slightly irregular flourish of the interlacing ribbons of calligraphy and the scrolls which struggle to fill the interstices. Eastern influences can be seen in this bowl, with its lobed rim in the Chinese style and interlacing calligraphy reminiscent of that seen in the minaret of Jam in Afghanistan.

Lustre-painted pottery was the jewel in the crown of Fatimid art, but it represented a relatively small proportion of Cairo's considerable ceramic output. A number of items in the Victoria and Albert Museum bear witness to a much greater variety of glazed and unglazed wares. Among these are works incised with *sgraffiato* decoration, carved, modelled and covered with transparent coloured glazes. *Sgraffiato* involves the technique of engraving the design through the white slip into the earthenware body. One such bowl has a turquoise glaze over a modelled ribbed body with a band of scrolling *sgraffiato* decoration under the rim. Another vessel, covered with a green glaze, is a vase with a spherical body and missing neck. Near its rim are four rings suggesting that it was intended to be suspended and used for containing incense or perfume.[14] The whole surface is covered with a beautiful *sgraffiato* arabesque in the floral Chinese manner. According to Arthur Lane, the incised and carved details of such twelfth-century Fatimid ware 'sometimes recall the imported celadons of Yueh Chou and Lung-chuan ... along with other Sung wares'.[15]

Among the unglazed vessels in the Victoria and Albert Museum is a remarkably well-preserved water jug with a filter in its neck. Pieces of these throw-away earthenware vessels have accumulated for centuries in the rubbish dumps of Fustat, providing archaeologists with a wealth of material but problems with chronology. Porous water jugs were designed to keep water cool as it evaporated. The filters, which kept out insects, were perforated with a variety of fragile designs made up of ornamental, calligraphic, figurative and animal motifs. The range of design is considerable and the degree of finesse and imagination displayed in these modest household vessels is extraordinary. Many of the designs are purely abstract, revealing a fine filigree of star formations, strapwork, knots, loops and interlacing. The repertoire of animals, consisting of peacocks, lions, camels, hares, elephants and so forth, is similar to that of the other arts. Some, like the finely wrought peacock in the Museum of Islamic Art, Cairo, are executed with great refinement, while others have a slight folksy air. Familiar human figures bearing cups and drinking wine appear on these vessels, but many of the figures are long-nosed caricatures

and grotesques, and what distinguishes this category of artifact from the products of the higher arts is the humorous undercurrent which occasionally links both man and beast.

Rock Crystal and Glass

Among the most precious of the court arts was that of carved rock crystal. This is a clear transparent quartz and was most likely imported into Fatimid Egypt from East Africa. It resembles glass, and because the techniques of cutting rock crystal and glass are similar, the two crafts often operated side by side.[16] Rock crystal carving developed in Sassanian Persia and the most famous early example is a roundel, representing the enthroned Khusraw I, set in the centre of a gold dish known as the 'Cup of Solomon' in the Bibliotheque Nationale in Paris (631–78). The characteristic pear shape of Sassanian glass and metal ewers, based on earlier Roman vessels, provided a model for later Islamic works developed in Persia and Egypt. One example of this found in Fustat is a ninth-century glass ewer carved with relief. It was possibly from Persia and it proves that these designs were known to Fatimid craftsmen. The famous eleventh-century Fatimid rock crystal ewers with similar body shapes, elaborate relief and angled handles express the longevity and continuity of this ancient design.[17] These ewers, unlike many of the works of decorative art discussed so far, can be attributed to the workshops of Cairo. Al-Maqrizi mentions the wealth of court rock crystal listed by the Qadi ibn al-Zubayr in the palace treasury, and Nasir i Khusraw described more modest local products made for the lamp market in Cairo.[18]

The eleventh-century Fatimid ewers represent the peak of artistry in this medium and four vessels with inscriptions, arabesques and animal themes have survived in the Victoria and Albert Museum, the Treasury of St Mark's and the Pitti Palace in Florence. The Victoria and Albert ewer has no inscription but shows a scene of animal combat in which a falcon attacks a gazelle. This scene, represented on both sides of the body, is framed by scrolling arabesques with finely incised leaves twisting and curling over the stem. Swirling patterns of heavy arabesque festoon the creatures on the Venice and Florence ewers, which respectively feature a seated cheetah and a bird. The handles of all the vessels are elaborately cut and the thumb-rest on the Venice ewer is carved in the form of an ibex. These vessels display an exuberant baroque quality in the treatment of arabesque, the curling necks, beaks and feathers of the birds,

the curvature of the cheetah's claws and the flourish of its tail. Common to all three vessels are the bubbling, sparkling spheroids made of drilled concave dots which mould and articulate the bodies of the animals.



BELOW: Rock crystal ewer: eleventh century (Victoria & Albert Museum).

There are two ewers in St Mark's Treasury. One was made for the imam-caliph al-Aziz (975–96), but it came to Venice with treasures looted from Constantinople during the fourth Crusade and may originally have been a gift from the Fatimid caliph to the Byzantine emperor. Other objects found their way into the cathedral treasuries of the West as a consequence of pilgrimage or looting during the Crusades, and they were subsequently transformed into ecclesiastical objects. Rock crystal was particularly sought after in the West for its magical and medicinal properties and a number of precious artefacts were adapted as suitable receptacles for reliquaries. One such example, also in St Mark's Treasury, is a small tenth-century rock crystal bottle, decorated with arabesques, purporting to contain the Holy Blood of Christ. Another rock crystal reliquary containing the Holy Blood is in the abbey church of Gandersheim.[19] Besides reliquaries, other liturgical uses were found for rock crystal; for example the crescent of al-Zahir (1021–36) in the Germanisches Nationalmuseum, Nuremberg, now forms a part of a monstrance (a vessel in which the Host is exposed).

Most of the smaller rock crystal vessels were originally made as bottles to contain medicines, spices, scents and cosmetics such as mascara. They are usually cylindrical in shape and decorated with bands of arabesque and benedictory inscriptions. Two such items, displaying rich interlacing arabesques, are in the Victoria and Albert Museum. Another, in the Museum of Islamic Art, Cairo, has no arabesque but a simple Kufic inscription offering 'Blessing upon its female owner'. Some bottles are flask shaped, such as that in Essen Minster, which shows an arabesque in the Samarra style C surviving well into the tenth century. Two flasks in the Victoria and Albert Museum and Keir Collection are very similar in design. Both are

decorated with palmettes, but the Keir flask, dating from the early eleventh century, also features two confronted parrots. Parrots and other exotic birds would have been kept in court aviaries and they feature on rock crystal flasks and ewers, such as those in the Louvre Museum and in the Museo Arqueologico in Madrid, as well as turning up in contemporary metalwork. Other bird and animal forms are common in rock crystal and one example, in the British Museum, represents just one of fourteen bottles carved in the form of a crouching lion. Also in the Victoria and Albert Museum there is a pendant in the shape of a fish. This may originally have been a perfume bottle but the head of the fish has been removed in order to set the vessel into its pendant mount.[20] As already noted, the fish with its Christian symbolism was not uncommon in Fatimid ceramics. Also with its roots in Coptic art is our friend the hare. It appears in the form of a hare-shaped bead in the Keir Collection and probably had an amuletic function.[21]



ABOVE: Rock crystal lamp: early ninth century (Hermitage Museum).

Besides ewers, jugs, bottles and flasks, other rock crystal artifacts included lamps, chess pieces and mace heads. One beautifully carved boat-shaped lamp, in the Hermitage Museum, St Petersburg, shows a vine-scroll which C. J. Lamm compared to similar acanthus scrolls at Samarra.[22] This piece, which has variously been dated between the early ninth and eleventh centuries, indicates the difficulty of dating such artifacts on stylistic grounds. As we have seen in the Essen Minster bottle, the bevelled Samarra style survived well after the Tulunid period. It is clearly manifest on a number of chess pieces, such as those in the Victoria and Albert and the Kuwait National Museum, which display palmettes and birds similar to those found in Tulunid woodwork. It may well be that the survival of this bevelled cursive style was due to its amenability to crystal and glass cutting techniques such as bow drilling, grinding and wheel cutting.

Excavations carried out at Fustat between 1964 and 1980 by George T. Scanlon and Ralph Pinder-Wilson have revealed a wide variety of domestic glassware in all shapes and sizes dating back to the eighth century. This includes a range of bowls, beakers, vases, jugs, flasks, lamps, cosmetic flasks and goblets, as well as specialist vessels



ABOVE: Lustre-painted bowl: tenth to eleventh century (Metropolitan Museum of Art).

used by druggists and alchemists. Much of this glass is plain, but a significant amount was decorated by means of hot and cold-working techniques. Hot-working methods included moulded, pinched, tonged and trailed decoration. Moulded decoration was produced by blowing molten glass into various types of metal or terracotta moulds, while pinched and tonged decoration was formed by the action of pincers and tongs on heated glass. Trailing was a form of decoration in which strands of molten glass were wound around the surface of a vessel. A form of trailing known as marvered trailing produced very distinctive polychrome designs displaying parallel wavy and globular lines, usually in white against a dark background. It is a technique that dates back to Pharaonic times, consisting of rolling soft threads and globules of opaque glass into a transparent or translucent matrix. Bevelled, faceted and relief-cut objects employed cold-working techniques such as grinding, drilling, scratching, wheel-cutting and lathe-turning. Other forms of more luxurious decoration consisted of lustre-painting, gilding and enamelling.

Among the most eye-catching objects to survive from the eighth to the twelfth centuries are lustre-painted vessels. Possibly the earliest surviving example is a goblet with a missing stem in the Museum of Islamic Art, Cairo. Painted in a chestnut-brown on both the inside and outside is a series of palmettes made up of trilobed leaves framed in heart-shaped panels formed by stems and leaves. Above this is a band of scrolling leaves and in the bottom of the goblet is a rosette. Below the rim, dating this firmly to the eighth century, is an inscription dedicated to the governor of Egypt, Abd al-Samad ibn Ali (722–802).

Another lustre-painted object displaying an inscription is a shallow dish dating from the eighth or ninth century in the Kuwait National Museum. It has flared sides inside painted with a Kufic inscription reading 'Blessing and well-being from [the food] eaten [from the dish] … I shall tell you a story, the essence of which lies in the moment my eyes were embellished with kohl when I saw the gazelle with a curving neck.'[23]

Three lustre-painted vessels from the Fatimid period are also worth noting. Dating from the ninth or early tenth century is a

lustre-painted bottle in the David Collection, Copenhagen, which according to Stephano Carboni represents a transitional design between the classical and Islamic worlds. Painted in chestnut-brown, the palmette-shaped leaves retain something of the character of those Hellenistic vine scrolls that were absorbed into Umayyad art. Here, however, they assume an overall surface pattern that possibly owes more to the influence of Samarra arabesques.[24] The lobed leaves also begin to resemble the vegetal forms observed in Fatimid lustre pottery. More structured in its design is a flared, bucket-shaped bowl dating to the tenth or early eleventh centuries in the Metropolitan Museum, New York. It displays lustre-painted palmette-shaped trees in a layout of alternating roundels and trapezoid panels. Below the rim is a Kufic inscription which contains only a few words that can be deciphered.

Another bowl, dating from the eleventh to twelfth centuries, can be seen in the British Museum. With its bulbous, ribbed shape and flared neck, it is a good example of mould blown glass. The decoration, painted on the outside, has an engaging spontaneity with scrolling motifs around the shoulder and fluid vertical lines articulating the radiating ribs.

Equally distinctive are small cosmetic flasks displaying mavered trailed decoration. The earliest example found at Fustat is a flask dating from the ninth century in the Museum of Islamic Art, Cairo. It displays the characteristic wavy trails in opaque white against a translucent dark blue background. More striking in its polychrome design is a bottle dating from the eighth or ninth century in the Kuwait National Museum.[25]

It was made in Egypt or Syria and displays wavy trails of brownish red, blue and yellow which dominate the dark purple background. Also in the same collection is a glass bird-shaped object – a very popular genre of vessel produced throughout the ninth to twelfth centuries. Attributed to Egypt or Syria, it is free-blown with mavered trails in opaque white and red against a translucent dark purple background.

Trailed glass vessels have an appealing elegance and simplicity with their fine linear threads of clear or opaque red, white and turquoise glass over a clear transparent body. One of the best-preserved examples, dating from the seventh or eighth century, is a bottle from either Egypt or Syria in the Metropolitan Museum of Art. It is a free-blown vessel with a tall neck and globular body covered with dark blue trails spiralling round the neck and forming a looped design around the body.



ABOVE: Trailed glass bottle: seventh–early eighth century.



ABOVE: Tenth-century pincer decorated bowl (Victoria & Albert Museum).

This design has its origins in the Roman period but fragments excavated at Fustat show that it was being manufactured there well into the eleventh century. Examples of this design are still being produced and these vessels can be bought very cheaply in the bazaars of Cairo today.

It was also an international design and a similar shaped mould-blown example can be seen in the Victoria and Albert Museum. It dates from the ninth or tenth centuries and, according to Contandini, the circular relief decoration shows possible Persian influence.[26] Also in the same collection are two objects showing pincer and tong decoration. One is an elegant green glass cup dating from the ninth to eleventh centuries with a ring-shaped handle and body decorated with pincered oval motifs under the rim. The other is a shallow pincer decorated bowl with rosettes that became distorted from their original circular form when the glass was reheated and blown again in order to achieve its full circular shallow body.[27]

A good example of tonged decoration is displayed on a bowl dating from the ninth to tenth centuries in the Museum für Islamische Kunst, Berlin. This decoration, with its circles and S-shapes, demonstrates that Samarra style C influenced glassware as well as rock crystals during this period.

The dating of many glass vessels has been made possible by the systematic excavations at Fustat by George T. Scanlon and Ralph-Pinder Wilson, as well as the discovery of the Serçe Limani shipwreck (near Bodrum in Turkey) with a cargo of glass dating

from the second quarter of the eleventh century. The Victoria and Albert Museum contains a number of items that are very similar to glass vessels found in the shipwreck. One is a well-preserved undecorated clear glass water jug with a bulbous body, flared neck and right-angled handle with a thumb-rest.[28]

With its flared neck and globular body, the shape of this jug is characteristic of that which developed in mosque lamps. Earlier mosque lamps are goblet shaped with stems, feet and truncated conical bowls designed to hang from chains or be free-standing. It is a shape that goes back to the fourth-century Byzantine world. Two well-preserved examples of this type can be seen in the Museum für Islamische Kunst, Berlin, and the Museum of Islamic Art, Cairo. The Berlin lamp dates from the ninth to eleventh centuries, but the Cairo lamp found in the excavations at Fustat can be more precisely dated to the eighth century.

Of cold-working glass vessels the most famous group of cut glass objects are beakers – fourteen in total – known as 'Hedwig' glasses (possibly twelfth century). They were scattered around Europe, turning up in the ecclesiastical domain, and tradition has it that two belonged to St Hedwig, princess of Silesia (1174–1245). They are clear glass vessels with a tincture of smoky topaz carved out of solid glass blocks with relief designs of lions, gryphons, eagles and abstract patterns. The provenance and date of these vessels are debatable. It is claimed that two came from Syria in the early thirteenth century but most scholars attribute them to Egyptian craftsmanship. However, because there is no evidence of contemporary Islamic cut glass work of this type, it has been suggested they might be of Byzantine origin. What is certain is the Eastern origin of the designs. According to Ettinghausen and Grabar, four clearly exhibit Samarra style C and some may date from as early as the tenth century.[29] This date probably applies to the beaker from Veste Coburg which reveals a symmetrical Samarra pattern of indented and projecting volutes tightly organized into its bevelled surface. Whatever their date and provenance all these beakers are singularly inventive in design terms. Those featuring lions, eagles and gryphons sustain a high level of abstract integration in their cross-hatched, multi-layered and multi-faceted designs. The cut and bevelled surfaces interpenetrate, fusing figure and background, and the tension between the cursive contours and angular cross-hatching produces a distinct style resembling early Cubism.

The Fustat excavations have revealed a variety of other vessels made with cold-working techniques, including scratch-engraved, wheel-cut, faceted and bevel-cut objects. Most of the finer scratch-





TOP: Mosque lamp: ninth to eleventh century (Museum für Islamische Kunst).

ABOVE: 'Hedwig' beaker: tenth century (British Museum).

engraved and wheel-cut vessels are in fragments, but many of the faceted and bevel-cut objects were made of thicker glass and have survived intact, mainly in the form of small cosmetic flasks. Like the Hedwig glasses, the designs are 'Cubist' in form with sides shaped into polygonal sections and surfaces faceted into a variety of crystalline and chevron patterns by means of wheel-cutting and grinding. Some flasks rest on a flat base, others have splayed feet and some, like the so-called molar flasks, have several pointed toes. In shape, a number of these flasks are like miniature ancient amphoras.[30]

Fatimid Textiles

As well as rock crystals, the European cathedral treasuries served as repositories for Islamic textiles where they were used as vestments or shrouds for the relics of saints. They have preserved not only Islamic textiles, but also precious Byzantine silks which in their turn reveal something of the cosmopolitan language of Middle Eastern and Mediterranean textiles. For example, a twelfth-century Byzantine silk in the cathedral treasury of Sens, used for the shroud of St Potentien, displays a repeat pattern of paired birds and Sassanian gryphons set in roundels framed with pseudo-Kufic inscriptions. From as early as the eighth century Byzantine silks have revealed Sassanian influence, but the pseudo-Kufic in this design is indicative of the way Byzantine exports followed Islamic fashion.

Another example of cosmopolitan art, now in the Kunsthistorisches Museum, Vienna, is the beautifully preserved coronation mantle of Roger II of Sicily. It is dated 1133–4 and the inscription states that it was made in the royal workshops of Sicily. Like the paintings in the Cappella Palatina it was almost certainly the work of Fatimid artists, and alongside the mosaics in the royal palace and Cappella Palatina it vividly reveals the dichotomy of Byzantine and Islamic culture in Sicily, particularly with regard to the symbolism of regalia.

In the Martorana at Palermo, a mosaic shows Roger II represented in the Byzantine manner, crowned by Christ, and wearing imperial robes embellished with the French fleur-de-lis. The image asserts his claim to the title of 'Basileus', king or emperor, and foreshadows his ambition to achieve, through marriage, equal status to the Byzantine emperor Manuel.[31] The Vienna coronation mantle, however, expresses Roger's Arab persona and the design is purely Islamic. Bordered with arabesques and Kufic, it is embroidered with gold and coloured silks on a red background, and the main design

shows a central palm tree dividing two groups of lions and camels in combat. The royal symbolism is less explicit than the Martorana mosaic, but according to Ettinghausen, the motif of a lion attacking a weaker beast, with its roots in the ancient Near East, has imperial symbolism.[32] The style is rich, heraldic and decorative, as one would expect for a coronation robe. The decorative integration of the design is masterly in the way that motifs are repeated and transposed. The tendril of the vine, for instance, forms arabesques on the breasts, shoulders and flanks of the animals, scrolls along the outstretched palm and curls into quatrefoils on the border, while the tips of the palm fronds find their echo in the curling mane and claws of the lion. However, as in Fatimid pottery, this emblematic style combines with a remarkable grasp of naturalism revealed in such features as the buckling of the camels' legs under the weight of the leaping lions. The attribution of the coronation mantle to Fatimid artists is mainly on stylistic and circumstantial grounds and cannot be proved.

More certain in their attribution are the fragments of embroidered Fatimid textiles in the Newberry Collection in the Ashmolean Museum, Oxford. They offer some insight into the design of more modest artefacts such as towels, covers, scarves and shawls. Unfortunately all that has survived are embroidered fragments and their original function is a matter of speculation. They show that



ABOVE: Coronation mantle of Roger II (Kunsthistorisches Museum).

animal motifs, particularly birds and peacocks, were as commonplace in textiles as in all the other decorative arts.

Some fragments show confronted birds standing in front of stylized palmette-shaped trees similar to those in the Metropolitan lustre-painted glass bowl.

A fragment of twelfth-century *tiraz,* embroidered with Naskhi script, incorporates within a scrolling arabesque intricate medallions containing birds and geometric designs. Other fragments display colourful bands of repeat patterns and borders derived from Kufic script.



ABOVE: Twelfth-century linen embroidered border with pattern derived from Kufic (Ashmolean Museum, Oxford).

The best-known example of Fatimid *tiraz* survives in the Cathedral of Sainte-Anne, Apt, Vacleuse. It is known as the 'Veil of St Anne' and its Fatimid provenance is absolutely certain. It was brought into France by the Bishop of Apt after the first Crusade. The broad composition of this plain linen cloth, with its three narrow vertical bands of silk and gold tapestry arranged down the centre and two ends, follows the Coptic tradition. However, the interlace and roundels with their strange sphinx-like creatures and other animals is, according to Patricia Baker, more related to the later art of Islamic Spain.[33]

The inscription is dated 1096–7 and Damietta is identified as the place of manufacture. The inscriptions in the roundels are interesting, offering in equal measure blessings to 'the imam Abu al-Qasim al-Mustali billah, commander of the faithful' and 'the

most illustrious lord al-Afdal, the sword of the imam, the illustrious of Islam'. The fact that al-Afdal, the vizier, is given equal billing to the imam-caliph al-Mustali is significant.

The imam-caliph al-Mustali (1094–1101), the youngest of al-Mustansir's sons, was 18 when he was put on the throne by the vizier al-Afdal. He was chosen because he was the most amenable of al-Mustansir's successors, while the eldest, Nizar, was imprisoned and later disappeared. However, al-Mustali died at the age of twenty-four in 1101 and throughout his short reign he served only as a puppet, while the real power was in the hands of al-Afdal, who ruled Egypt for 20 years. Following the death of al-Mustali, his successor, al-Amir, came to the throne as a five-year-old infant, thus guaranteeing al-Afdal's continuance of power. Al-Afdal's manipulation of the succession caused instability in Egypt, and Fatimid weakness abroad led to serious territorial losses in Syria and Palestine, first to the Seljuk Turks and then to the Crusaders. It was during the campaign of 1099 that the Lord and Bishop of Apt acquired the 'Veil of St Anne' in the plunder that followed the capture of Jerusalem and a serious military defeat for al-Afdal near Ascalon. It was these events that precipitated the downfall of the Fatimid dynasty and the eventual rise of Salah al-Din and Ayyubid rule in Egypt.

Chapter Four

Ayyubid Architecture

Salah al-Din, son of Najm al-Din Ayyub, founded the Ayyubid dynasty, which lasted in Egypt for just eighty-one years (1171–1252). It was an age dominated by the Crusades, when Salah al-Din restored Muslim self-esteem after the humiliation of the Frankish occupation of the Levant and capture of Jerusalem in 1187. The conflict, however, was not a simple contest between Muslims and Christians, because most of Salah al-Din's military campaigns were directed against his Muslim adversaries rather than the Franks. This began almost as soon as he assumed power in Egypt when he was still officially in the service of the Zangid prince Nur al-Din. As he increased and consolidated his power base in Egypt he gained more independence and paid only lip-service to Nur al-Din, rendering little in the way of monetary or military tribute. He continued to build his own formidable army and conflict between the two men would have been inevitable had it not been for Nur al-Din's death in 1174. With his death the Zangid territories in Syria and Mesopotamia disintegrated into small principalities as various opportunists and members of Nur al-Din's family fought over the spoils.

Like Nur al-Din, Salah al-Din understood that the long-term defeat of the Franks depended on reuniting these territories with Egypt. He now had the will and strength to do this, and for the best part of twelve years his energies were directed at his Muslim opponents while keeping a circumspect distance between himself and the Franks. When he had completely secured Ayyubid control over Syria, he then turned his attention towards the Crusader kingdoms. His caution with the Franks had finally evaporated with

Raynard of Chatillon's attacks on Muslim shipping, repeated atrocities against Muslim pilgrims and violation of treaty obligations. Salah al-Din began his *jihad* (holy war) in 1187 with the sinking of Raynard's fleet, followed by the crushing defeat of the Crusader armies at the battle of Hittin. He then went on to capture Jerusalem, the fall of which had enormous symbolic importance for both Muslims and Christians. These events prompted the third Crusade led by a formidable Western alliance between the emperor Frederick Barbarossa, Philip Augustus of France and Richard the Lionheart of England. It was a hard-fought campaign in which the Franks recaptured Acre, but failed to sustain the momentum of their offensive, and Jerusalem stubbornly remained in Muslim hands. The campaign ended with a three-year truce allowing the Christians unarmed access to the holy places. Salah al-Din's conquests in Syria and Palestine were recognized and all that was left to the Franks was a coastal strip stretching from Antioch to Jaffa.[1]

In Egypt the death of the last Fatimid imam-caliph, al-Adid, gave Salah al-Din the opportunity of restoring Sunni orthodoxy, and the name of the Abbasid caliph al-Mustadi was proclaimed in the *khutba*. The rest of the Fatimid royal family in Cairo were moved to a building known as the Dar al-Muzaffar, situated to the north of the western palace, where they were put under house arrest. Tradition has it that male and female members of the family were segregated to forestall procreation, but the Fatimids survived for almost another century. During the reign of al-Malik al-Adil they were transferred to the Citadel where the last of the family died in the Tower of the Serpents. Salah al-Din assigned the main eastern and western royal palaces to his family and commanders while he took up residence in the Dar al-Wizara. This building had been the administrative centre of the Fatimid empire and it remained the main residence for the Ayyubid sultans until the Citadel was completed.[2] Of the royal palaces al-Maqrizi has this to say:

> He [Salah al-Din] inspected the servants and slaves in [the eastern palace] and let go those who were free and employed the remainder of them. He let for sale all old and new. He continued the sale of what he found in the palace for ten years. He emptied the inhabitants from the palace and bolted the doors. Then his *amir*s [commanders] took possession of them. He boarded up the residences of the caliphs

> and their following. He assigned some of them to his leading men and sold some of them. Then he divided the palaces. He gave the great palace to his *amir*s and they lived in it. His father, Najm al-Din Ayyub ibn Shadhi, was assigned Qasr al-Lu'lu on the Khalij as his residence. His companions took over buildings connected with the Fatimid dynasty and if a man wanted a house, he threw out its inhabitants and settled in it. Al-Qadi al-Fadil said that in … 1171–2 the contents of the special store houses in the palace were exposed. There were a hundred boxes of magnificent clothing, valuables, etc … The western palace was emptied.[3]

His choice of residence and the sale of the palace artifacts were indicative of Salah al-Din's indifference to luxury and ostentation. His humble and abstemious nature made him more like Omar and the Prophet's Companions, and the contrast between him and his indulgent Fatimid predecessors was considerable. In many ways he embodied the virtues of the perfect knight; always courteous, honourable and magnanimous towards his enemies, but in private a modest man with simple tastes, whose only pleasures were the open air, the chase, reading and intellectual debate. In his *History of the Crusades*, Steven Runciman quotes Vincent of Beauvais' account of how the dying sultan 'summoned his standard-bearer and bade him go round Damascus with a rag from his shroud set upon a lance calling out that the Monarch of all the East could take nothing with him to the tomb but this cloth'.[4] He is said to have found money 'no more important than sand' and amassed no personal fortune (only 47 silver dirhams and one gold ingot), despite his ambitions for the Ayyubid family and his personal lust for power.[5]

Such personalities tend not to be great patrons of the arts and certainly the end of an extravagant court art occurred during the Ayyubid period. Salah al-Din had neither the inclination nor the opportunity to cultivate courtly magnificence. He spent little time in Cairo and his military commitments in Syria and Palestine kept him away from the city during the last ten years of his reign. Nevertheless, those two areas that preoccupied him most – warfare and religion – did have a permanent impact on the architectural landscape of the city. The first priority was the fortification of Cairo against Crusader attack, but with the restoration of Sunni Islam,



ABOVE: The Southern Cemetery.

Salah al-Din was equally anxious to fortify the faith by building Sunni *madrasa*s. Military architecture, however, was the supreme expression of the Ayyubid period for Christians and Muslims alike. The great urban citadels of Cairo, Damascus and Aleppo are more than matched by the Crusader fortresses of Krak de Chevaliers, Marqab and Saone. The enduring legacy of Salah al-Din has to be the fortifications of Cairo and the building of the Citadel.

The most radical change he implemented was the enclosure of al-Qahira and al-Fustat within one city wall. Fustat had never been adequately defended, and when Salah al-Din came to the throne it was in a ruinous state after many years of economic decline. Its final demise occurred during the Crusader invasion of 1168 when the last caliph ordered it to be burnt, thus preventing Amalric using it as a base from which to besiege al-Qahira. The fire raged for fifty-four days, although the area around Amr's mosque and Babylon remained relatively unscathed. This area was quickly repopulated under Salah al-Din, but many refugees settled in al-Qahira, which had also suffered fire damage in the Armenian and Bab Zuwaila districts. This relocation of refugees began a process of breaking down the old hierarchical divisions between al-Qahira and Fustat, and the process continued as a matter of policy under Salah al-Din. The walled city of al-Qahira with its sacred palace precincts was gradually opened up to the general population, and its former exclusivity was destroyed. The amalgamation of the two cities involved not just a demographic change but a revolution in political, social and religious terms. Under Fatimid rule the vast majority of citizens were Sunni Muslims ruled by an elite class of Isma'ili Shi'ites. The old walled city of al-Qahira symbolized this, and the combining of the two cities swept away the prevailing order of political and religious separation.

From the Citadel at the hub, the long arms of Salah al-Din's fortifications embraced and enclosed both cities. To the south, an extensive wall skirted Fustat and Babylon, terminating at Bab al-Qantara on the Nile downstream from Rawdah Island. To the north, the walls enclosed the city of al-Qahira and extended eastwards to the old port of al-Maqs, terminating at the Tower of al-Maqs overlooking the Nile. The responsibility for this immense undertaking was given to the eunuch Baha al-Din Qaraqush, a trusted minister, who later became regent-governor of Cairo during the prolonged absences of Salah al-Din's successor, Sultan al-Aziz. As well as these works, Salah al-Din reconstructed and strengthened al-Jamali's walls around al-Qahira, and in addition to

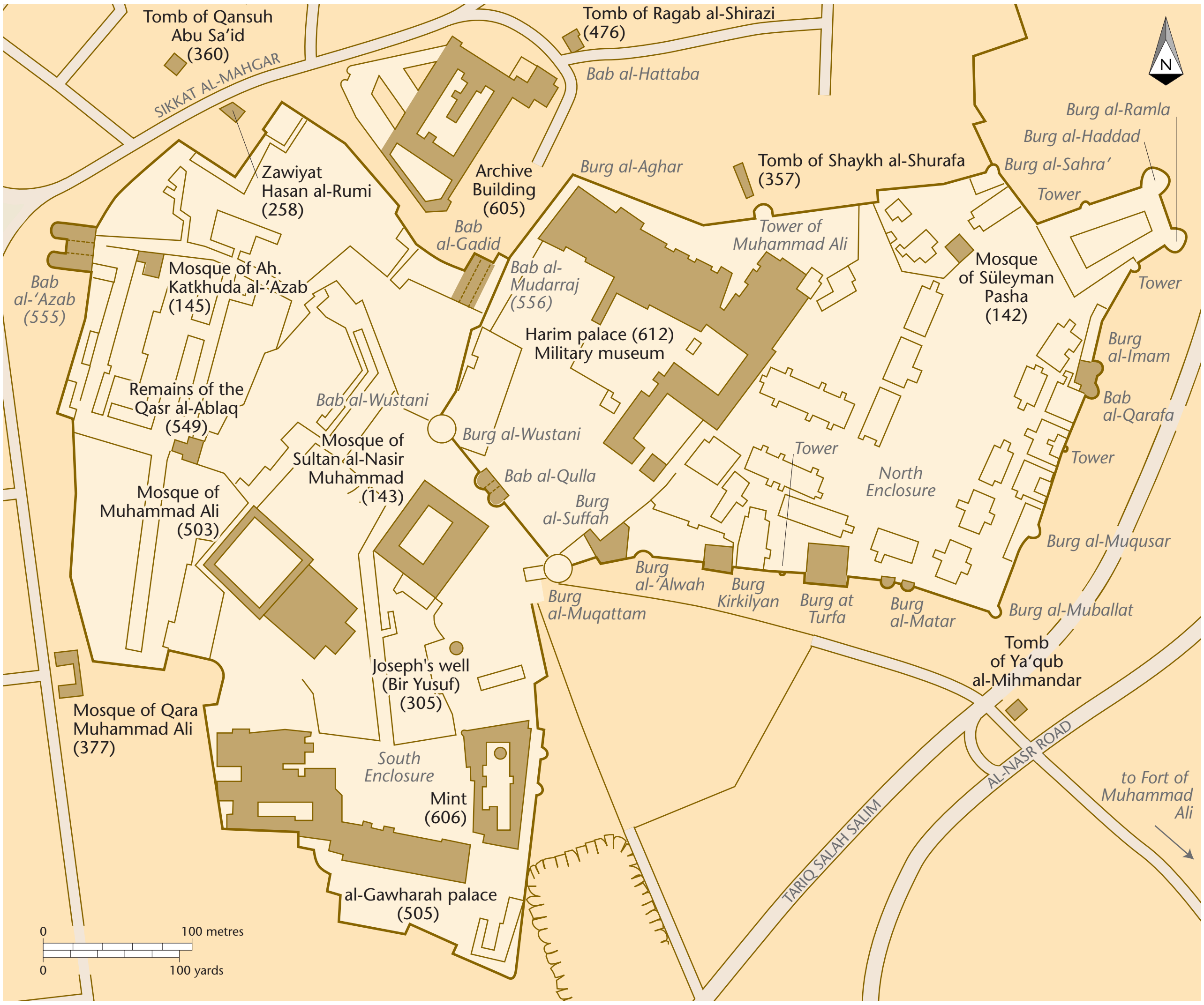
the main Citadel, fortifications were also built at Rawdah Island and Giza. Rawdah Island had been a major military base since before the Muslim conquest, and the garrisons both here and at the Citadel were to play a significant part in subsequent Egyptian history.

The building of the Citadel on the Muqattam hills has to be Salah al-Din's most spectacular contribution to Cairo's architectural history. According to al-Maqrizi he chose this location because the air was fresher, and tested it by hanging carcasses of meat on the site. He discovered that meat here remained fresh for more than two days, unlike the rest of Cairo where it went off after a day and a night. Pollution and bad air had been an important factor in Cairo's planning and development, but the building of the Citadel was determined not so much by its salubrious atmosphere, but by defensive necessity and the example of Syrian and Crusader military architecture. Salah al-Din was familiar with the Syrian citadels and the remoter strongholds of the Crusaders, and no doubt he had a vision of these in mind when he came to consider Cairo's defences. The spur of the Muqattam hills provided the ideal strategic and elevated position on which to build. It was perfectly situated to defend the city from external attack on the north-eastern side, as well as providing internal security for both the government and the military.



ABOVE: Salah al-Din's walls.

The Citadel today is roughly divided into the northern, southern and lower enclosures, and from the outset the residential and administrative area in the western enclosure was separate from the military compound in the north. The walls and towers of the northern section, which remain the most heavily fortified, are the surviving work of Salah al-Din and al-Kamil. According to al-Maqrizi, some of the smaller pyramids at Giza were demolished to provide the masonry, but the vast bulk of the building material was quarried nearby, thus carving out a substantial gap between the eastern walls of the Citadel and the main spur of the Muqattam



ABOVE: The Citadel.

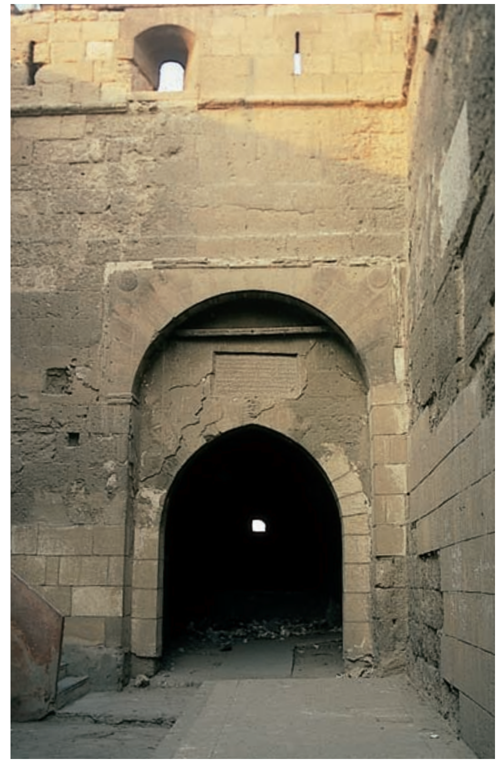
hills. Writing in his *Travels* (1183), the Andalusian traveller Ibn Jubayr observed much of this work carried out by Crusader prisoners of war:

> The forced labourers on this construction, and those executing all the skilled services and vast preparations such as sawing the marble, cutting the huge stones, and digging the fosse [defensive trench] that girdles the walls of the fortress noted above – a fosse hollowed out with pick-axes from the rock to be a wonder among wonders of which many traces remain – were the foreign Rumi prisoners whose numbers were beyond computation.[6]

Ibn Jubayr's account is supported by other observers, and it was estimated that up to 50,000 prisoners of war could have been working in Egypt well before Salah al-Din's major offensive against the Franks in 1187.[7] These numbers may be exaggerated, but it is most probable that they were prisoners captured in the campaigns of 1179. The digging of the fosse, as both a resource and defensive measure, was established engineering practice. It calls to mind the Crusader fortress of Saone, with its spectacular, sheer-sided chasm of a fosse excavated by the Byzantines and Franks.

The building of the Citadel began in 1176, although the foundation inscription on the main public entrance, the Bab al-Mudarraj (Gate of the Steps), is dated 1183. The inscription most likely marks the termination of the first stage of building, for it dates from the year after which Salah al-Din finally left Cairo.[8] The Citadel site was not virgin territory and had been built on since Abbasid times. The pavilion of the Dome of the Winds had stood here, and a number of Fatimid mosques and tombs were demolished in order to clear the site. Salah al-Din's building activity was mainly confined to the northern section of the citadel, and with the possible exception of Joseph's well, there is no archaeological evidence that he was responsible for any substantial building on the western side. According to Creswell, the original walls and towers of Salah al-Din extended for 1,400 metres, and most of the smaller semi-circular towers, faced with smooth dressed stone, can be attributed to him. Built mainly on rock to prevent undermining, they contain cruciform inner chambers with arrowslits, and project from the curtain wall at 100-metre intervals. The connecting curtain walls, surmounted by ramparts, contain a continuous inner gallery which is illuminated by the light of small rooms, pierced with arrowslits, set at 10-metre intervals.

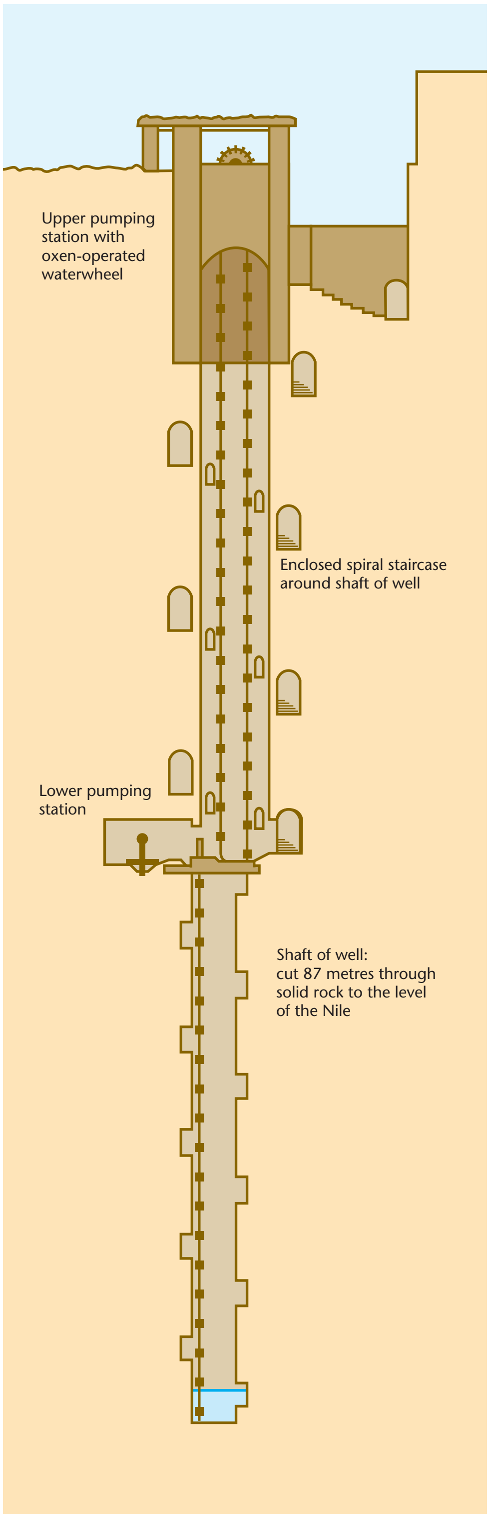
Three of the original Citadel gates, all dated 1183, the Bab al-Muddaraj, Bab al-Qarafa (the Cemetery Gate) and Eastern Gate or Rector's Tower (at Burg al-Imam), have survived in somewhat restored and altered conditions. The main gate, the Bab al-Muddaraj, is now sandwiched between Muhammad Ali's nineteenth-century Bab al-Gadid (the New Gate, 1826) and the original Ayyubid walls. It was approached via the Ramp Road, and a part of the original rock-cut ramp still leads up to the gate, although access to the northern enclosure was blocked by Muhammad Ali in the early nineteenth century. The gate is surmounted by a square Ottoman tower and the fifteenth-century inscriptions of Sultans Jaqmaq, Qa'it Bay and Tuman Bay I bear





TOP: Bab al-Mudarraj, Cairo Citadel.

ABOVE: Foundation inscription.



ABOVE: Joseph's Well.

witness to their restoration work. The entrance is original, with a round-arched opening leading to a pointed inner doorway over which is the foundation inscription written in one of the earliest examples of Naskhi script. Inside is a vestibule roofed with a shallow dome, at the centre of which is a painted relief bearing the name of the Bahri Sultan al-Nasir Muhammad. The two other gates, the Bab al-Qarafa and Eastern Gate, are situated respectively on the south and east side of the northern enclosure. Burg al-Imam was once approached by a bridge across the moat, and both gates are flanked by semi-circular towers, with bent, right-angled entrances and inner courts to foil and trap potential invaders. In 1501, Sultan Janbalat had the gates bricked up and filled with rubble as a defensive measure against the Ottoman Turks.

Joseph's well (Bir Yusuf) in the western enclosure is attributed to Salah al-Din, although it is probable that it existed in Fatimid times and was simply enlarged by Salah al-Din. Cut 87 metres through the limestone down to the water table, this double-shafted well is a remarkable piece of hydraulic engineering. Ibn Abd al-Zahir (1223–92) described it as follows:

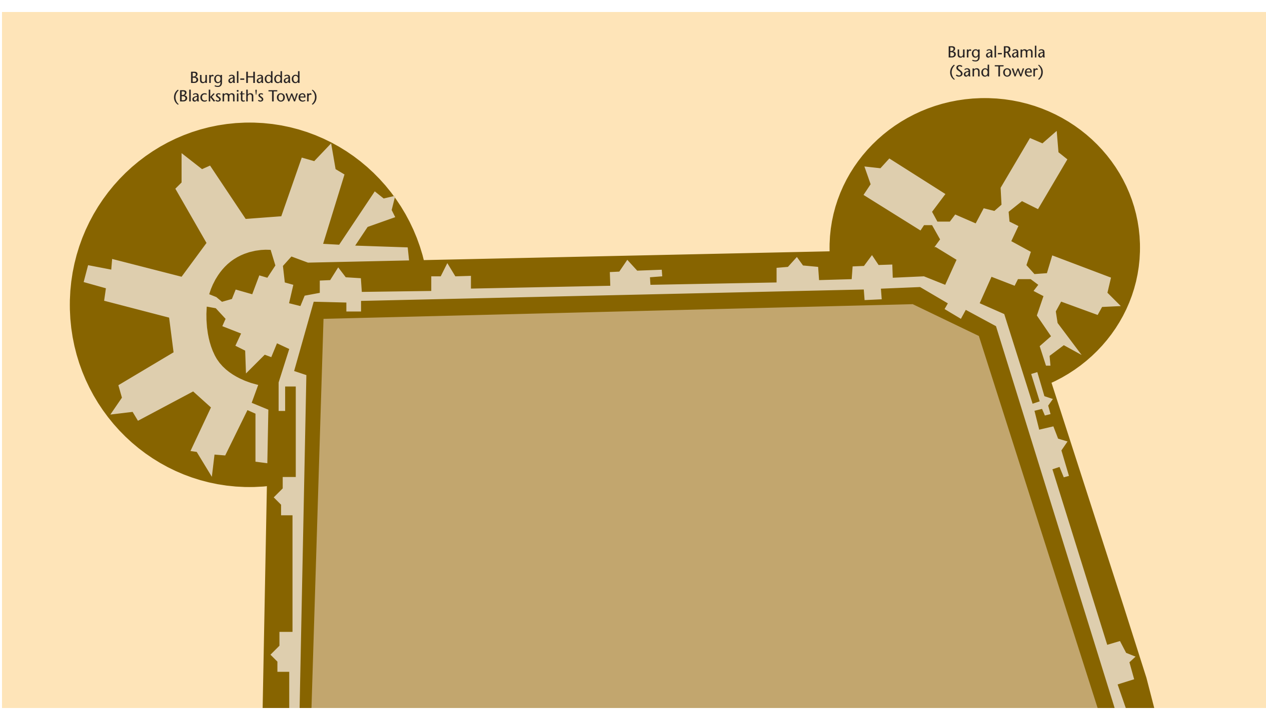
> At the top of the well cattle move in a circle to raise the water from a reservoir located at its mid-point [in depth], where other cattle raise the water from the lowest depths of the well. It has a path to the water by which the cattle descend to its spring. All this is cut into the rock; there is no building in it.[8]

The spiral staircase, down which cattle could be conducted, was lit from the inner well-shaft by intermittent pairs of windows. The water wheels and pumping mechanisms were not unique to this structure and there were other wells and cisterns on the Citadel. According to Behrens-Abouseif, Salah al-Din constructed an aqueduct, which, with the help of water wheels, conveyed and raised water from the Nile.[9]

After Salah al-Din's death in 1193 his son al-Aziz and grandson al-Mansur succeeded in turn to the sultanate, but al-Mansur was ousted in 1200 by his elderly uncle, al-Adil. Al-Adil was a distinguished politician and diplomat who had successfully worked in close partnership with his brother, Salah al-Din. He had acted as chief mediator between Richard the Lionheart and Salah al-Din (Richard and Salah al-Din never met) during the final settlement of the third Crusade. In the course of these negotiations Richard had

gone so far as to offer his sister's hand in marriage to al-Adil, in order to secure an alliance between the two sides. King Richard's proposal was not taken seriously, but it was some measure of his recognition of al-Adil's political status. With the death of Salah al-Din, most of al-Adil's diplomatic skills were directed towards the more difficult job of keeping the squabbling Ayyubid family together and consolidating its power. When he took office in Cairo he delegated administrative and political responsibilities to his sons, making al-Kamil his deputy in Cairo. It was al-Kamil who took direct responsibility for completing the Citadel, and when he became sultan he was the first to take up residence there.

Al-Kamil strengthened and enlarged some of the existing towers, and also added a number of square towers which served as self-contained keeps. Two of Salah al-Din's towers (1183–1202) guarding the eastern extremity of the Citadel, the Burg al-Haddad (the Blacksmith's Tower) and Burg al-Ramla (the Sand Tower), were enlarged by totally encasing them in new semi-circular units. In the Burg al-Haddad, Salah al-Din's original structure, with its cruciform interior, occupies the nucleus of the later tower. Connecting this with al-Kamil's outer extension are the original arrowslits, now



ABOVE: Plan of Burg al-Haddad and Burg ar-Ramla.

widened to function as doorways, leading into an encircling corridor from which radiates six outer chambers. These chambers contain arrowslits for archers, and on a higher storey the tower is punctuated by alternating arrowslits and *machicoulis* (projecting galleries from which boiling oil and molten lead were poured on enemy invaders). Salah al-Din's Eastern Gate was enlarged in like manner to form the double towers of what is now known as the Burg al-Imam (the Rector's Tower, 1183–1207). Other strengthening measures included the Burg as Sahra (the Desert Tower, 1183–1207) which was reinforced internally with a square tower to support mangonels.[10]



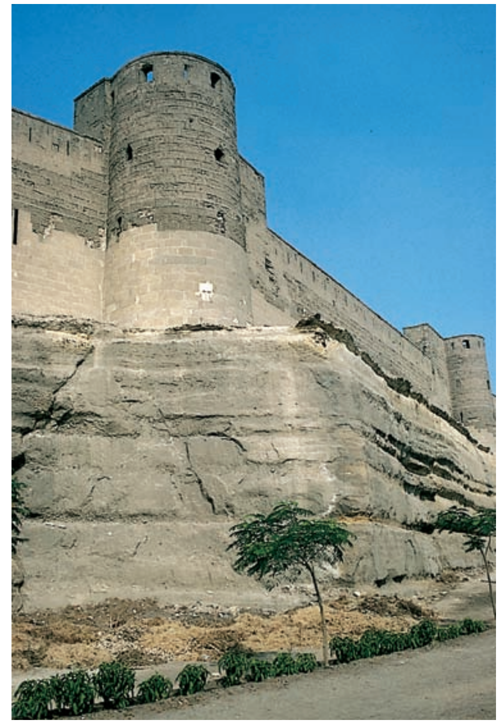
ABOVE: Citadel walls: Burg Kirkilyan and Burg at Turfa.

The most impressive of al-Kamil's structures was the series of massive rectangular keeps which straddled the walls of the northern enclosure. The best preserved are the Burg Kirkilyan (the Tower of the Serpents, 1207) and Burg at Turfa (the Masterpiece Tower, 1207) on the southern side of the northern enclosure. These are self-contained fortresses with numerous halls, barracks and storage rooms. Almost 30 metres square, the Burg at Turfa is the

largest. Its plan is divided into two sections with four spacious chambers for archers projecting out of the curtain wall at the front, and numerous halls and rooms behind. Some of the rooms in these keeps served as prisons, and as previously mentioned, the last members of the Fatimid family were imprisoned in the Burg Kirkilyan. All of al-Kamil's fortifications can be identified by their embossed, rusticated masonry, unlike Salah al-Din's towers, which have smooth dressed stone. This heavier, rusticated style became a common feature in other Ayyubid fortifications, and can be seen in the citadels of Damascus and Bosra in Syria (in the case of Bosra, the Ayyubid fortifications enclose a magnificently preserved Roman theatre).

The Citadel dramatically embodies the defensive priorities of the era, but for Salah al-Din, safeguarding the stronghold of faith was just as important. For this reason, when Sunni orthodoxy was restored to Egypt, ten *madrasa*s were established during his reign, and twenty-five in total during the whole Ayyubid period. Five *madrasa*s were founded by Salah al-Din, two near the mosque of Amr (al-Nasiriya and al-Qambiya), two by major shrines (al-Nasiriya at al-Qarafa and al-Husain) and one on the site of a former vizier's palace in al-Qahira (al-Qutbiya). All these locations have very high profiles, and as Neil MacKenzie has pointed out, their choice had religious, political and economic significance. The Fustat site was selected for its religious associations and the desirability of building in the shadow of tradition. Like a number of other *madrasa*s it was also chosen to regenerate a run-down area. Those *madrasa*s at the shrines of Imam al-Shafi'i and al-Husain were adjacent to important centres of pilgrimage, and in the case of the former, a major focus for Sunni devotion. The *madrasa* in al-Qahira, in common with other *madrasa*s built during Salah al-Din's reign, replaced buildings formerly associated with the Fatimid ruling class.[11]

The *madrasa*s were dedicated to the Shafi'i, Hanafi and Maliki *madhahib*, although the overwhelming majority were Shafi'i. Most Sunni Muslims in Egypt followed the Shafi'i *madhhab*, and for religious and political reasons, Salah al-Din devoted much attention to the establishment of a *madrasa* near the mausoleum of al-Shafi'i in the Southern Cemetery. Tombs, particularly those of the Prophet's descendants, had previously served as powerful symbols of political and religious legitimacy for the Fatimid regime. In his endeavour to strengthen Sunni Islam, Salah al-Din recognized the symbolic potency of al-Shafi'i's mausoleum and promoted it as a centre of



ABOVE: Citadel walls: towers of Salah al-Din.

pilgrimage. He commissioned a cenotaph and initiated some restoration work, but the major rebuilding occurred during the reign of al-Kamil, who also developed it as a dynastic mausoleum. Then, as now, the Southern Cemetery (al-Qarafa) was a hive of activity, forming the focus for individual and collective acts of pilgrimage, as well as a place to honour and visit the graves of deceased relatives. During the reign of al-Kamil a number of pilgrimages were formalized on a weekly basis, and he often led the Friday night procession from the *mashhad* of Sayyida Nafisa to the shrines of the seven sheiks.[12]

Ibn Jubayr provides the following contemporary description of al-Qarafa, the mausoleum and the *madrasa*:

> The night of that day [Wednesday 8 April 1183] we passed in the cemetery known as al-Qarafa. This also is one of the wonders of the world for the tombs it contains of prophets … of the kindred of Muhammad … of his Companions, of the followers of the Companions, of learned men and ascetics, and of saintly men renowned for their miracles and of wonderful report … The tomb of Shafi'i imam … a shrine superb in beauty and size. Over against it was built a school the like of which has not been made in this country, there being nothing more spacious or more finely built. He who walks around it will conceive it to be a separate town. Beside it is a bath and other conveniences, and building continues until this day. The measureless expenditure on it is controlled by the sheik, imam, ascetic, and man of learning called Najm al-Din al-Khubashani. The sultan of these lands, Salah al-Din, bounteously pays all for this purpose ... Al-Qarafa is remarkable for being all built with mosques and inhabited shrines in which lodge strangers, learned men, the good and the poor. The subsidy for each place comes from the sultan, and likewise it is for the theological colleges in Misr [Fustat] and al-Qahira.[13]

The mausoleum of al-Shafi'i now forms part of a nineteenth-century mosque complex and access to it is through this building. It is one of the largest mausoleums in the Muslim world and its



height of 29 metres is almost that of the Dome of the Rock in Jerusalem. Its format is essentially a domed cube, and from the outside there is a two-storeyed rectangular structure supporting a lead-sheathed dome surmounted by a boat-shaped finial. The cornice of the first storey is decorated with a geometrical frieze beneath a balcony displaying interlaced patterns in brick and stucco. The second storey is inset by one metre, allowing for a walkway behind the balcony, and its chamfered corners are pierced with keel-arched doorways. It is decorated with blind keel-arched niches, the spandrels of which are filled with alternating rosettes and lozenges, and the cornice is crowned with perforated, stepped merlons. This storey effectively conceals the zone of transition within, and the double wooden dome springs directly from it. As Behrens-Abouseif has observed, the profile of this dome is distinctive, bending immediately from the zone of transition, unlike Fatimid domes, which

ABOVE: Mausoleum of al-Shafi'i.



ABOVE: Zone of transition inside the mausoleum of al-Shafi'i.

curve higher up from the intermediary walls of a circular drum.[14] The lead sheeting, put on in the late eighteenth century, conceals some of the green tiles which covered the surface when Sultan al-Ghuri restored it in 1503–4.

The interior of the mausoleum has a diameter of 15 metres and displays various stages of restoration. The dado, patterned with rectangular panels of polychrome marble, is Mamluk, and almost certainly the work of Sultan Qa'it Bay (late fifteenth century). It is pierced by two windows, and the one in the north-western wall may have formed a part of the original entrance. Following the example of a number of Fatimid mausolea the south-eastern *qibla* wall displays three *mihrab*s. The tomb is not aligned with Mecca, so a fourth *mihrab* was installed in the south-eastern corner. The whole of the interior above the dado consists of horizontal bands of arabesque and cartouches of Naskhi inscriptions richly gilded and intricately painted in red, green and black. The original Kufic inscription forms a continuous band painted gold and green, and projecting from this are eight beams supporting an octagonal timber frame from which hang numerous mosque lamps. The painted and gilded zone of transition is made up of three tiers of *muqarnas* and blind pointed arched panels, pierced at the centre of each side with pointed and lozenge-shaped windows filled with fine stucco grilles and coloured glass. The zone of transition is thought to be the work of Sultan Qa'it Bay, although the design follows tradition, remaining more or less faithful to the original structure. When al-Ghuri's dome was covered with lead sheeting in 1772, it was also decorated on the inside by Salih Afendi for Ali Bay al-Kabir.

Inside the mausoleum, within an enclosure hidden by a wooden screen (*maqsurah*), is the cenotaph of al-Shafi'i. This was commissioned by Salah al-Din and is a masterpiece of Ayyubid woodwork. It is one of only two cenotaphs of this quality that survive, the other being from the shrine of al-Husain in the Museum of Islamic Art, Cairo. The cenotaph of al-Shafi'i is made of teak and is signed and dated Ubayd ibn Ma'ali, 1178. The design consists of dense geometric stellar patterns with inscription bands in Kufic and Naskhi. Geometrical decoration is its dominating feature, and it marks an advance towards the more abstract style, anticipated in earlier Fatimid works such as the wooden *mihrab* of Sayyida Ruqayya. This cenotaph, and that from the shrine of al-Husain, display a certain austerity in their rigorous control of compact geometric elements, expressing something of the

disciplined spirit of the age. The cenotaph of al-Shafi'i belongs to a distinguished genre of Ayyubid woodwork and it is possible that it came from Syria. Ubayd ibn Ma'ali came from a distinguished family of woodworkers. His father was Ma'ali ibn Salam who made the *mihrab* of the Maqam Ibrahim on the Citadel at Aleppo (1167–8). Ma'ali's other son, Salman, with the help of three craftsmen from a village near Aleppo, was responsible for the famous *minbar* (now destroyed) in the al-Aqsar Mosque in Jerusalem (1168–9). Other distinguished examples from the workshops of Aleppo include the *minbar* in the Great Mosque of Hama (1163, also destroyed) and the *mihrab* in the *madrasa* Halawiya in Aleppo.

Three other cenotaphs are situated in the tomb beside that of al-Shafi'i. There is that of Muhammad Abd al-Hakim, whose family vault provided the original accommodation for al-Shafi'i's grave. Princess Adiliyya, wife of al-Adil and mother of al-Kamil, is buried under a wooden cenotaph, and there is also the tomb that al-Kamil set aside for himself. He never liked it, and, like his father and uncle, he died in Syria and is buried in Damascus. It is interesting to note that other burials recorded here include al-Kamil's son, as well as Princess Shamsah, wife of Salah al-Din, and her son, al-Aziz. It was common practice in the Muslim world for burials to accumulate around the tomb of a holy sheikh in the belief that those interred would absorb something of the saint's *baraka*. No doubt al-Kamil had this in mind when he buried his family here, but it is also obvious that he intended to develop the monument as a dynastic mausoleum for the Ayyubid family.

The al-Shafi'i mausoleum is now a part of a mosque complex, but it is important to hold in mind Salah al-Din's original *madrasa*. In developing a *madrasa* alongside a mausoleum, Salah al-Din was following a distinctive Syrian architectural tradition: that of the funerary *madrasa*. Although *madrasa*s originated in Persia, during this period they multiplied in Syria, where they acted as a bulwark against Isma'ili propaganda. They tended to be small institutions devoted to the study of one *madhhab*, and they often incorporated a mausoleum which functioned like a chantry chapel for offering prayers to the deceased. Most of the great protagonists of this period are buried in such institutions in Damascus. These include Nur al-Din (*madrasa* Nuriye, 1162–72), Salah al-Din (*madrasa* Aziziye, 1196) and al-Adil (*madrasa* Adiliye, 1172–3). This tradition survived in Damascus well into the beginning of the Bahri Mamluk era with the interment of Sultan al-Zahir Baibars and his son, al-Sa'id Baraka Khan, in the *madrasa* Zahiriye (1277). In Cairo (with the exception of al-Shafi'i's mausoleum

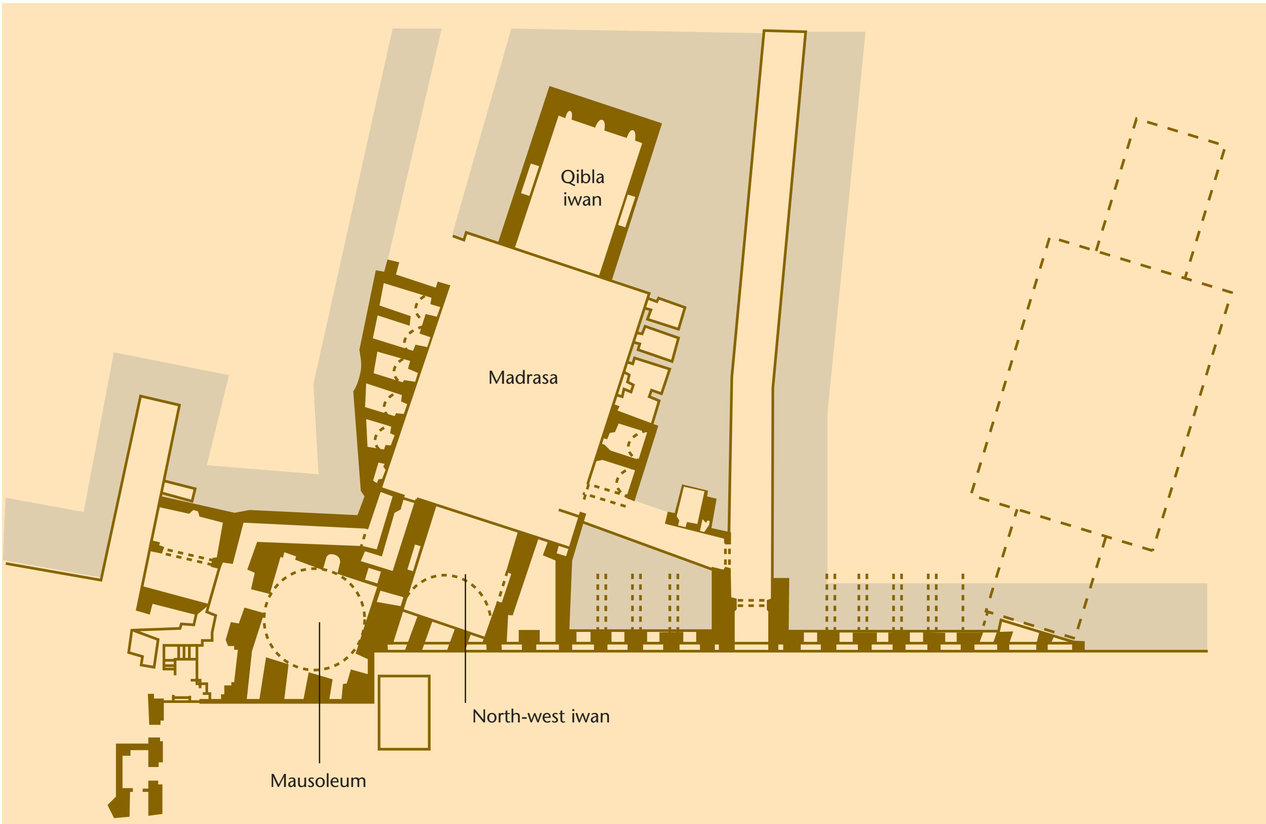
and *madrasa*), the first tomb to form a part of a *madrasa* complex was constructed at the end of the Ayyubid period. This was part of the *madrasa* of Sultan al-Salih Najm al-Din Ayyub (the Salihiya, 1242), which was also the first *madrasa* in Egypt to teach all four *madhahib*.

The remains of the Salihiya are situated on al-Mu'izz street opposite the mosque and *maristan* of Qala'un. According to al-Maqrizi, Sultan al-Salih destroyed a part of the great eastern palace in order to build two *madrasa*s. These *madrasa*s were in fact two wings of one institution divided by a public passageway. Like the al-Aqmar mosque further up al-Mu'izz street, these parallel wings are set at an angle behind the street façade in order to align with Mecca. Each wing is built around an open inner court, overlooked on the north-eastern and south-western sides by two storeys of student accommodation, and flanked on the south-eastern and north-western sides by two open vaulted halls known as *iwan*s. This introverted plan of *iwan*s facing a court derives from Persia, and the *iwan* is an ancient architectural feature going back to pre-Islamic Parthian and Sassanian times. Teaching took place in the *iwan*s, and at the Salihiya the northern wing was dedicated to the Maliki and Shafi'i *madhahib*, and the southern wing to the Hanafi and Hanbali *madhahib*. This was not the first *madrasa* to introduce the *iwan* court into Egypt, but it is the earliest surviving building of this type and its composition is highly significant in the development of Cairo's subsequent architecture.



ABOVE: *Madrasa* of Sultan al-Salih.

Much of the exterior today is obscured by shops, and all that can be clearly seen from the street is the minaret and parts of the façade above the central passage that once divided the two wings. The minaret is of the *mabkhara* ('insense burner') type with two shafts divided by a balcony. The lower shaft is rectangular and the upper octagonal, crowned with a ribbed helmet dome. The rectangular shaft is relieved on each side by three tall recessed keel-arched panels with ribbed hoods. The lower parts of these recesses are further indented with lobe-arched panels and the central panel on each side is pierced by a window. The upper octagonal shaft also has keel-arched recessed panels, but it is a more open structure, fretted and pierced with lobe-arched windows. Adding greater enrichment and sculptural relief towards the top are two bands of *muqarnas* supporting the ribbed helmet dome. The minaret stands directly over the entrance passage, the door of which has a lintel of joggled voussoirs (interlocking brick or wedge-shaped units) surmounted by a shallow relieving arch. This is flanked by keel-arched niches with colonnettes and fluted sunburst hoods. Above this is a



splendid keel-arched panel with a fluted sunburst of radiating *muqarnas* framing a central panel containing the foundation inscription written in Naskhi. On either side of this are two rectangular recessed panels with rosettes and *muqarnas*. Like the al-Aqmar mosque this arrangement of panels forms a masterly composition in relief, exploiting the play of light and shadow across these beautifully proportioned and precisely delineated crystalline surfaces. The rest of the façade is broken by tall recessed panels, keel-arched at the centre and square-headed over the rest, with windows at ground-floor level.

Except for the façade, nothing of the southern wing has survived, and the remains of the northern wing are fragmentary, with only the north-western *iwan* surviving with its original vaulting. The larger *qibla iwan* had three *mihrab*s and the other two sides of the *sahn* were overlooked by irregular barrel-vaulted rooms providing student accommodation. The north-western *iwan* was devoted to the Maliki *madhhab* and the south-eastern *qibla iwan* to the Shafi'i *madhhab*. The considerable asymmetry of this plan is due to the problems of reconciling established public thoroughfares with the

ABOVE: Plan of mausoleum and *madrasa* of Sultan al-Salih.



ABOVE: Mausoleum and *madrasa* of Sultan al-Salih.

necessity for aligning the main buildings towards Mecca. These irregularities were compounded when al-Salih's widow, Shajar al-Durr, added his mausoleum to the *madrasa* in 1249. In building this mausoleum she not only created a funerary *madrasa*, but also established the subsequent practice of interring the benefactor in the religious institution of his or her foundation. The mausoleum of al-Salih is a domed cube set adjacent to the northern wing of the *madrasa* and projecting out of the main street façade. The profile of the dome is similar to that of the mausoleum of al-Shafi'i, but it springs from a stepped, octagonal zone of transition pierced on four sides by pointed and hexagonal shaped windows. The street façade is divided by three keel-arched recesses opened at ground level by rectangular windows with iron grilles. The interior of the tomb retains much of the original Ayyubid wood carving in the cenotaph, doors, panels and window shutters. The *mihrab* is flanked by green columns with bell-shaped capitals and until recently there were traces of the original mosaic decoration in the hood.

Besides the *madrasa*, Sultan al-Salih's other building activity was concentrated on the new citadel at Rawdah Island. Between 1239 and 1244 he took the significant step of moving out of the Citadel and creating a new palace and centre of government, as well as a barracks for 1,000 Mamluk troops. These Mamluks became known as *al-Bahriya* ('of the river'), or Bahri Mamluks, to distinguish them from the Burji Mamluks ('of the tower') who were garrisoned in the Citadel. According to al-Maqrizi, al-Salih built sixty towers on the new citadel wall, and within its enclosure trees were planted and recycled Pharaonic granite and marble columns were used to build houses, palaces and a mosque.[15] One contemporary description, quoted by al-Maqrizi, is provided by Ibn Sa'id:

> Al-Malik al-Salih was one of the greatest builders among the sultans. I saw on this island a throne room – I have never seen its like before, and I cannot assess its cost. In it are gilt surfaces and marble – ebony, camphor and veined – which boggle the mind, paralyse the eyesight, and even confer benefit to the blind. The enceinte encompassed a large tract of land. Part of this area was enclosed by a fence, which preserved the sultan's wild game, and beyond this were meadows leading towards the Nile.[16]

There is some speculation as to why al-Salih chose to establish

this new centre of government in the suburbs. From a defensive point of view it was a weak alternative to the Citadel, but security may not have been the issue. Taste was most likely the guiding principle, and he may have simply preferred a spacious environment, with a garden setting near the Nile, to the confines of an urban citadel. As well as providing a military base, the grounds of Rawdah Island had for centuries been a popular promenade and recreation centre with numerous pavilions and pleasure domes. Another factor which must be considered is al-Salih's decision to take up residence near his Mamluk troops. Such a move was indicative of his reliance, trust and close relationship with these soldiers, who now formed the *corps d'élite* of the Egyptian army. This bond between al-Salih and his Mamluks had a far-reaching influence on the course of Egyptian history.

Mamluks were soldiers of slave origin, conscripted mainly from the Turkish tribes of Central Asia and the Caucasus. They were usually bought as children, given a rigorous military training and education, manumitted and prepared for the highest offices of state in both the army and civil service. As soldiers they proved far more loyal and reliable than the mixed contingents of Kurdish, Berber and Sudanese troops that formerly constituted the bulk of the Egyptian army. Mamluks achieved high office and wealth by virtue of merit, but their offspring could not inherit rank and office. For this reason, in both the political and military spheres, they proved efficient and loyal servants to the sultan, remaining aloof from the clannish factionalism that usually dogged the politics of court and army life. The Mamluks, however, proved to be a double-edged sword. They became a formidable and powerful faction in themselves, eventually usurping the power of the sultans and establishing their own dynasties.

Sultan al-Salih used his Mamluk troops, in alliance with the Khwarazmian Turks, to great effect in the continuing campaigns against the Franks. His victories in Palestine were due in large measure to one of his Mamluk officers, al-Zahir Baibars, who later became sultan and principal architect of the Bahri Mamluk regime. The success of these campaigns prompted Louis IX of France to launch a new crusade. King Louis landed in Egypt in 1248, captured Damietta, and attacked the Egyptian army at Mansura where he briefly secured a foothold in the Delta with enormous losses to his cavalry and archers. Baibars managed to hold the line for the Egyptians, but the lingering death of al-Salih, and the consequent uncertainty of the interregnum, placed the army in a precarious position. During this

crisis al-Salih's remarkable widow, Shajar al-Durr, concealed the death of her husband and became de facto ruler of Egypt until al-Salih's successor, Turan Shah, could be withdrawn from Mesopotamia. When he arrived on the scene, Turan Shah successfully captured thirty-two French ships, cut off their supplies and eventually forced them to retreat with the loss of 30,000 Crusaders. In the wake of this defeat King Louis was taken prisoner and held to ransom.

Turan Shah proved to be a vicious and arrogant man, and his victory did little to earn the support and respect of the ruling establishment in Cairo. He antagonized the Bahri Mamluks by granting promotion and favours to his own Mesopotamian troops, and further provoked them when he accused Shajar al-Durr of embezzlement and threatened her with imprisonment. The Bahri Mamluks remained fiercely loyal to Shajar al-Durr and Turan Shah's repeated attempts to curtail their power eventually prompted Baibars and his companions into action. They attacked Turan Shah in his camp, ran him through with a spear, and finally killed him as he escaped down the river. The Mamluks then took the unprecedented step of declaring Shajar al-Durr sultan of Egypt. This elevation of a woman to the sultanate proved unacceptable to the Ayyubid princes, and the caliph in Baghdad, al-Mustasim (from whose harem she originated) vetoed her appointment, quoting the saying of the Prophet, 'Woe to the nations ruled by women'.

A compromise was reached when Shajar al-Durr agreed to abdicate and marry the Mamluk commander-in-chief, Amir Aybeg. He became sultan on condition that he divorce his first wife, and in order to appease the Ayyubid princes, it was arranged that he should govern jointly with al-Ashraf Musa, the six-year-old great-grandson of al-Kamil, thus ensuring some vestige of Ayyubid rule in Egypt. In reality Shajar al-Durr wielded the power behind the throne where she efficiently controlled the purse strings of the administration. Aybeg soon deposed al-Ashraf Musa, and his successful campaigns against the Ayyubids in Syria sustained his brief rule as first sultan of the Mamluk dynasty. Despite these successes he did not enjoy the resolute support of the Bahri Mamluks and he increasingly resented his subordinate relationship with Shajar al-Durr. In order to remedy this situation he attempted to sideline his wife by proposing marriage to the Emir of Mosul's daughter. This act of betrayal angered Shajar al-Durr, so she took her revenge and had him assassinated. He was murdered in his bath after a polo match, but her action won her no support or protection. She was immediately arrested, and after four days'

imprisonment in the Red Tower on the Citadel, she was in turn murdered in her bath by the slave girls of Aybeg's former wife.

Despite the brevity of her reign, Shajar al-Durr effectively presided over the transition from Ayyubid to Mamluk rule. Her main architectural contribution was al-Salih's mausoleum, but she also built a *madrasa* in the cemetery of Sayyida Nafisa where her own mausoleum (1250) stands, opposite the shrine of Sayyida Ruqayya in an area where a number of female saints are venerated. The mausoleum is a free-standing domed cube made of brick covered with stucco. Its exterior underwent a number of changes when it was incorporated into a nineteenth-century mosque complex, and for this reason there is none of the original decoration on the north-west and north-east sides. The dome, with six windows at its base, has a keel-arch profile, and the stepped zone of transition is pierced on each of its four axial sides by three window lights. There are doors at the centre of each side of the mausoleum, except in the *qibla* wall, which is decorated, like the south-west wall, with keel-arched panels, rosettes and lozenges. Inside, the most interesting feature is the *mihrab* with its mosaic hood framed by a radiating, crystalline pattern of *muqarnas*. The mosaic in gold, green, red and black features a tree bearing mother-of-pearl fruit – an allusion to Shajar al-Durr's name, which means 'Tree of Pearls'. The hood rests on the ends of a wooden Fatimid frieze which extends into a continuous band bearing Kufic inscriptions around the walls of the mausoleum. The precise location of Shajar al-Durr's grave is uncertain, but it is thought that the present cenotaph stands over the grave of one of the later Abbasid caliphs, either al-Mutawakkil I (d. 1406) or al-Mutawakkil III (d. 1538).

Many of the earlier Abbasid caliphs are buried nearby in the mausoleum of the Abbasid caliphs in the precincts of the Sayyida Nafisa mosque. This significant monument is attributed to the Ayyubid period, and the oldest inscribed cenotaph in this mausoleum is that of Abu Nadlah, the caliph's ambassador, who died in 1242. It is thought that this may be the original date of the tomb but whether this mausoleum was built for him (as suggested by Creswell) is uncertain. The scale of the building suggests a royal mausoleum, and there has been some speculation that it may have been intended for al-Adil II, the sultan deposed by al-Salih in 1240. What is reasonably certain is that the mausoleum was not originally built for the Abbasid caliphs. The Abbasid caliphate was wiped out later in the Mongol sack of Baghdad in 1258, but a



ABOVE: Mausoleum of Shajar al-Durr.



ABOVE: Mihrab in mausoleum of Shajar al-Durr.

nominal caliphate was revived when Baibars invited al-Mustansir, an exiled member of that family, to Cairo, where he was installed as caliph in 1261. He, like his successors, served as a mere figurehead, adding religious prestige to the Mamluk regime but exercising no political power. The earliest datable burial of an Abbasid caliph in the mausoleum is that of al-Wathiq in 1341, but of earlier burials the most significant are those of Baibars' sons, Anas Bay (died 1266) and Omar (died 1269).

The composition of the tomb is very similar to that of Shajar al-Durr: a cube surmounted by a dome with a keel-arch profile and a stepped zone of transition pierced on four sides by triple sets of windows. The exterior walls are each divided by three keel-arched recessed panels with fluted rosettes and strapwork lozenges in the spandrels. The central recesses on each side contain doors, except the *qibla* wall, which is marked by the *mihrab* salient. Keel-arched



LEFT: Interior of mausoleum of the Abbasid caliphs.

doors on the exterior are matched inside by magnificent fluted keel-arched panels set in the centre of each wall. Those on the north-west and *qibla* sides have hollowed niches and those on the other sides are flat. They follow the Fatimid composition of a fluted sunrise, radiating from a central medallion or keel-arched panel. Each hood is lined with *muqarnas* and set in a rectangular panel of lace-like, stucco arabesque framed with bands of Kufic. Above these panels the intricacy of the decoration is continued in the stucco tracery and stained glass of the windows, as well as in the zone of transition and dome, painted with medallions, inscriptions and delicate foliate scrolls in red, yellow, dark blue and white.

This is a magnificent interior and there is some speculation as to who is being honoured with this lavish treatment. The decoration is thought to be the work of Baibars, although its delicacy and refinement are not in character with the robust severity of his own mosque in Cairo or the bold interior design of his mausoleum in Damascus. It is possible this work was dedicated to his sons, but, as Hillenbrand has suggested, it could also be explained as 'an act of piety on behalf of the resuscitated caliphate'.[17] If this were the case, then this building, like the mausoleum of Shafi'i, marks another significant endorsement of Sunni orthodoxy on behalf of the new Mamluk regime. The mausoleum of the Abbasids is a transitional building, built during the Ayyubid period, but finding a new meaning under the Mamluks. Like the mausoleum of Shajar al-Durr, it bestrides the end of the Ayyubid and the inauguration of the Mamluk eras.

Chapter Five

The Architecture of the Bahri Mamluks

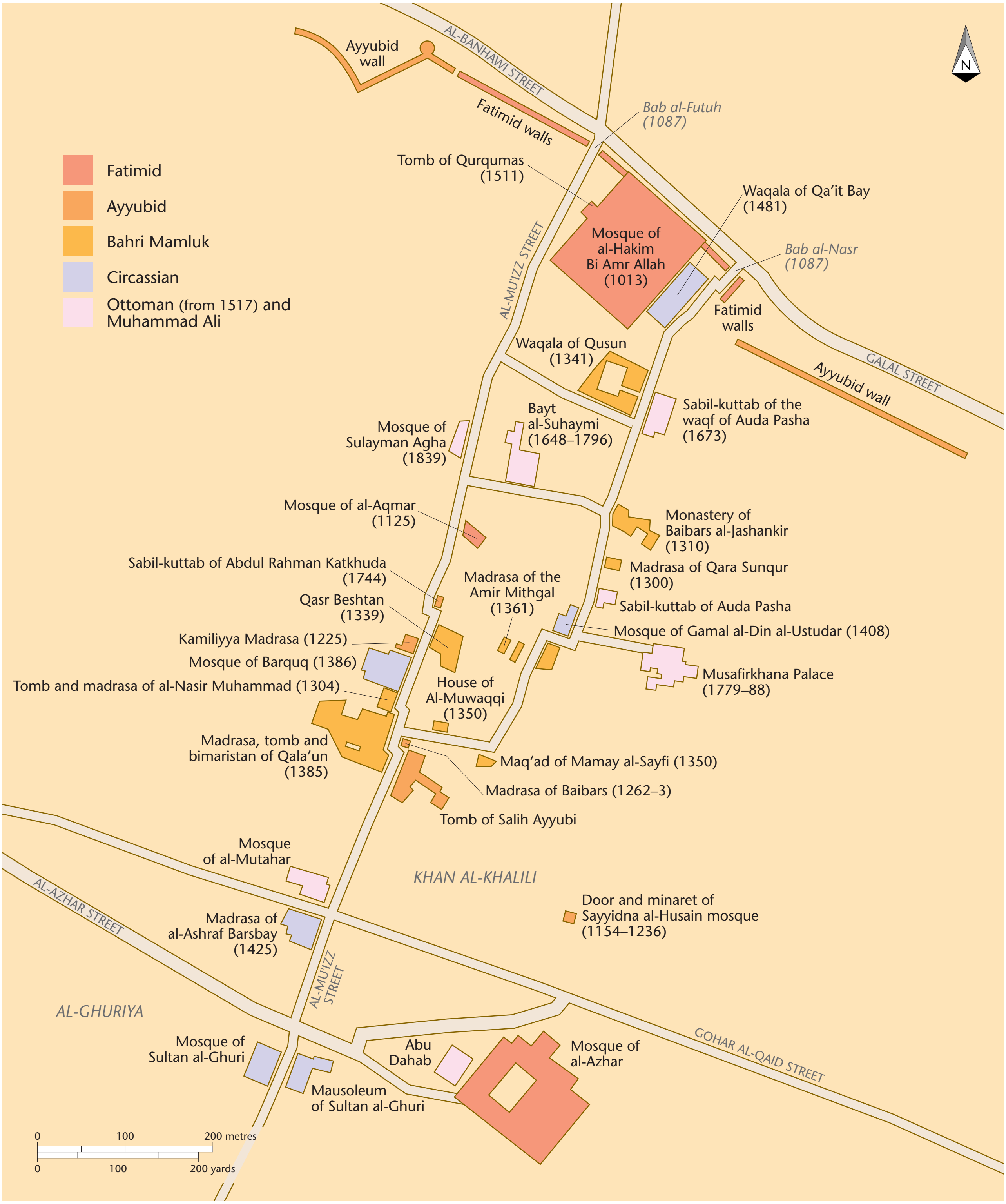
The first of the Bahri Mamluk sultans was Aybeg, although the unofficial crown ought to go to Shajar al-Durr. What he shared with his immediate successors, Qutuz and Baybars, was a common allegiance to al-Salih. They had all been loyal Bahri Mamluks in his service at Rawdah Island, and unlike the Burji Mamluks at the Citadel they had been al-Salih's chosen men. The immediate task facing this new ruling military elite was to head off the Mongol threat. The Ayyubid era (1171–1250) was dominated by the Crusades, but for the Muslim world as a whole, these wars were a mere sideshow compared to the devastation wreaked by the Mongol invasions of the thirteenth century. Arab rule had long been in decline, and Turkish invaders from the eleventh century onwards had made significant incursions into the Muslim world by establishing two great empires. These were the Great Seljuk sultanate of Persia (including Mesopotamia) and the Seljuk sultanate of Rum in Anatolia. The Abbasid caliphate was reduced to a puppet regime under the Great Seljuks and the success of Turkish expansion westwards became a severe threat to the Byzantine empire. In 1071 the Christian world was devastated by two major set-backs – the capture of Jerusalem by the Turks and the Seljuk victory at Manzikert, which made possible the Turkish occupation of Byzantine territory in Anatolia. The battle of Manzikert was a turning point in history, and it was these events that prompted Pope Urban to initiate the first Crusade.

The Seljuk empires consolidated Sunni Islam and these regions underwent a cultural renaissance with a flowering of philosophy,

literature, the sciences, art and architecture. All this was shattered by the brutality of the Mongol invasions, which began after Chengiz Khan's unification of the Mongol tribes in 1201. He first invaded China and overthrew the Kin Empire, capturing Beijing in 1215. He then invaded Central Asia, occupying Transoxiana and northern Persia, reaching as far west as Azerbaijan. The great cities of Central Asia – Bukhara, Samarqand, Balkh, Merv and Nishapur – were destroyed, and where resistance occurred, the populations were slaughtered. When Chengiz Khan died in 1227 his empire was divided between his eldest sons. Kublai Khan became the Great Khan and founded the Yuan dynasty in China, and his brother, Hulagu, established the Ilkhanid dynasty in Central Asia and northern Persia. The momentum of the Mongol expansion continued as Hulagu extended his empire into the rest of Persia, Armenia, Georgia and Iraq, capturing Baghdad in 1258. The caliphate and the city were destroyed and the Muslim world was plunged into its worst crisis. The irresistible advance of the Mongols continued into Anatolia and Syria, where they formed alliances with the Armenians and Franks. They captured Aleppo, Damascus, Nablus and Gaza, and eventually sent ambassadors to Cairo demanding the submission of Egypt.

The Mamluk sultan, Qutuz, defiantly refused, and by way of reply, executed the ambassadors and displayed their heads on the Bab Zuwaila. After negotiating with the Franks, he obtained free passage for his army through Palestine, and with his general, al-Zahir Baibars, he attacked the Mongols at Ayn Jalut. It was a decisive victory for the Mamluks and for the first time the Mongol army was defeated. They were no longer invincible and the tide turned quickly against them in Syria as Qutuz went on to liberate Damascus and put Homs, Hama and Aleppo into safe Mamluk and Ayyubid hands. Qutuz and Baibars were Turks, and as the thirteenth-century historian Abu Shama has observed, '… it is a remarkable thing that the Tartars were defeated and destroyed by men of their own kind, who were Turks …'[1] The victory at Ayn Jalut was due in part to Baibars' brilliant leadership of the vanguard, but a bitter quarrel broke out between him and Qutuz. According to the historian Ibn Taghribirdi (d. 1469/70), Qutuz had promised Baibars the governorship of Aleppo if they won the battle, but he then reneged on the deal.[2]

When Qutuz returned to Cairo, Baibars and a number of other disaffected amirs conspired to murder him. Qutuz had a passion for hunting, and they managed to lure him away from the security of his army by persuading him to course hare. After the



ABOVE: From the Fatimid gates to al-Azhar.

chase he was murdered, but accounts vary as to who dealt the mortal blow. When the assassins returned to Cairo a Turkish law was invoked maintaining that the killer of a ruler should become the ruler. Baibars confessed sole responsibility for the murder and was proclaimed sultan. With the deaths of Turan Shah and Qutuz under his belt, Baibars had proved himself a calculating regicide, and this ruthlessness of personality in some large measure explains the success of his long and effective reign (1260–77). He became the fourth Mamluk sultan, but in many respects he was the founder and architect of the Bahri dynasty.

After Salah al-Din, Baibars was undoubtedly the strongest leader to emerge from Egypt. He continued, in a less gentlemanly fashion, where Salah al-Din left off, but despite Ayn Jalut, the Mongols remained the real threat to the Egyptian–Syrian axis rather than the Franks. Holding the Mongols in check was Baibars' first priority and this involved a united front in Syria. For this reason he waged war against those Ayyubid principalities he needed to keep under his control, as well as suppressing other dissidents and enemies, including the Franks, the Armenians and Assassins. Against the onslaught of the Mongols, he became the main defender of Sunni Islam, and with this in mind he salvaged the caliphate and brought al-Mustansir to Cairo where he was proclaimed caliph. This action brought the Hijaz within the Mamluk empire, and Egypt gained further prestige when she assumed responsibility for safeguarding the pilgrimage and the Holy Places. Baibars also proved to be an astute statesman by forming diplomatic and trade links with Constantinople, Sicily, Aragon and various Italian states.[3]

Like Salah al-Din, Baibars' energy was concentrated on warfare rather than patronage of the arts. Nevertheless, it is claimed that he erected as many as 269 buildings across the Mamluk empire.[4] Of the palace he built on the Citadel only the base of a tower remains, and all that has survived of any substance in Cairo is his mosque (1266–9), which stands in a ruinous condition in the northern suburbs beyond the Fatimid gates of Bab al-Nasr and Bab al-Futuh. This huge free-standing structure was the first major mosque built since that of al-Hakim. The Ayyubids used the mosque of al-Hakim as their principal *jami* and preferred to refurbish existing buildings rather than build new mosques. Baibars, who took a great personal interest in the building of his mosque, supervised its planning and organized the recycling of materials taken from Crusader buildings in Jaffa. Its long horizontal elevation with projecting gates and



ABOVE: Mosque of Sultan al-Zahir Baibars.

corner buttresses recalls the mosque of Mahdiya in Tunisia, but its plan with a large domed sanctuary suggests Seljuk influence.

The hypostyle plan consisted of a *sahn* surrounded with *riwaq*s three aisles deep on the north-eastern and south-western sides, and a *riwaq* two aisles deep on the north-western side. The prayer hall was six aisles deep and the large dome over the *mihrab* covered nine bays. The aisles in the prayer hall ran parallel to the *qibla* wall except for three at the centre which were higher and arranged perpendicular to the *mihrab*; they had a processional function leading towards the domed sanctuary in front of the *mihrab*. The wooden dome, made up of material salvaged from the Crusader Citadel of Jaffa, was supported by heavy piers and its size was similar to that of al-Shafi'i's mausoleum. The considerable scale of this dome marks a significant innovation, producing a discrete sanctuary within the prayer hall similar to Persian and Anatolian mosques. According to Hillenbrand, this domed structure also functioned as a *maqsura*, a special enclosure for the sultan.[5] The long lateral sweep of the exterior walls is broken at regular intervals by the vertical projection of buttresses marking the points where the interior arcades terminate against the inner wall. Between these buttresses and running continuously along the walls, the solid masonry is pierced by pointed arched windows which once contained stucco grilles. The main entrance to the mosque is a cubic structure projecting out of the centre of the north-western wall, and two other gates, smaller in scale, project from the north-eastern and south-western sides of the mosque.



ABOVE: North-east gate of Sultan al-Zahir Baibars' mosque.

Decoration on the exterior is sparing, limited to the three gates and the continuous crenellation of stepped merlons. The main gate is vaulted with a shallow dome supported on pendentives and the entrance arch has cushion voussoirs like those in Bab Zuwaila and contemporary Crusader architecture, such as the Church of the Holy Sepulchre in Jerusalem. Its front and sides are decorated with keel-arched recessed panels, niches, rosettes and lozenges. This entrance once formed the base of the minaret, made up of two shafts, one rectangular and one octagonal, surmounted by a dome. The rectangular shaft survived into the Napoleonic era and its stump is illustrated in the *Description de l'Egypte*. Both smaller side entrances are cross vaulted and the arched entrances are flanked with niches set in recessed panels. The arches in these entrances differ in their decoration; the one in the south-west wall is lobed, while the north-east one has chevron patterns similar to those in Romanesque architecture.

In many respects this huge mosque was a worthy successor to that of al-Hakim, and its buttressed, fortified severity reflects the

tough unyielding personality of its creator. It is small wonder that Napoleon found this a suitable building in which to garrison his troops. Little else remains of Baibars' patronage in Cairo except the remnants of his *madrasa* (1262) next to the mausoleum of al-Salih in al-Mu'izz street. This was originally a large cruciform *madrasa* dedicated to the Shafi'i and Hanafi *madhahib*. All that is left is a section of a room in the south-west corner with some fine decoration over the window lintels. The lintels are decorated with tight hexagonal patterns, reminiscent of the best of Ayyubid woodwork, and between this and the lance-point decoration above the relieving arch are two confronted lions. These heraldic beasts are synonymous with Baibars, and similar lions appear around the base of the Burg al-Siba (Lions' Tower) in the Citadel. Here they are more sculpturally realized, and they are all that remains of Baibars' palace in the southern enclosure. His legacy, however, is still manifest in those walls and towers, such as the Bab al-Qulla, that now roughly replace those he originally built dividing the northern and southern enclosures.

The lions of Baibars are symbolic of his nature and royalty, but cats of another kind shed a completely different light on his character. According to E. W. Lane, in his *Account of the Manners and Customs of the Modern Egyptians* (1836), Baibars bequeathed a garden for the benefit of destitute cats:

> The sultan Ez-Zahir Beybars bequeathed a garden, which is called 'gheyt el-kuttah' (or the garden of the cat), near his mosque, in the north of Cairo, for the benefit of the cats: but this garden has been sold over and over again, by the trustees and purchasers: the former sold on pretence of it being too much out of order to be rendered productive, except at a considerable expense; and it now produces only a 'hekre' (or quit-rent) of fifteen piastres a year, to be applied to the maintenance of destitute cats. Almost the whole expense of their support, has in consequence, fallen on the Kadee, who, by reason of his office, is the guardian of this and all other charitable and pious legacies, and must suffer for the neglect of his predecessors. Latterly, however, the feeding of the cats has been inadequately performed. Many people in Cairo, when they want to get rid of a cat, send or take it to the Kadee's house, and let it loose in the great court.[6]



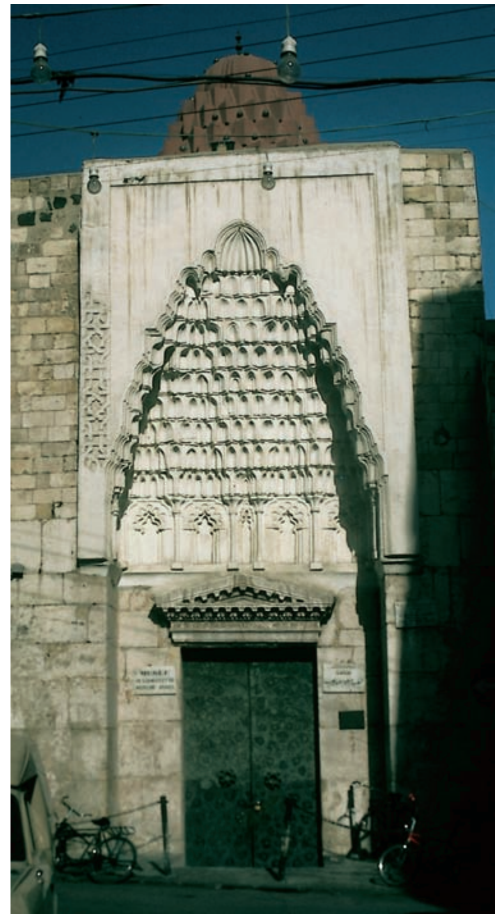
ABOVE: Lion at the base of Burg al-Siba.

Baibars was succeeded in turn by his sons al-Sa'id Baraka Khan and al-Adil Salamish, but they were deposed after a year by Sultan Qala'un (1280–90). The Mamluk dynasty did not have a systematic hereditary principle, and this proved to be an unsettling factor in both the Bahri and Burji regimes. From the outset a pattern emerged whereby the amirs chose the next sultan. This often involved individuals staking their claim and canvassing support, leading inevitably to bloody power struggles. Sometimes, for the sake of peace, the son of a sultan was allowed to inherit, but this was usually a brief interregnum until a stronger candidate could be appointed. Despite these difficulties the accession of Qala'un inaugurated a period of stability and he founded a dynasty which lasted a hundred years. The house of Qala'un relied on a succession which was partly hereditary and partly appointed. Eldest sons usually, but not always, succeeded, and sometimes the succession went to chosen Mamluks rather than blood relatives.

Qala'un proved to be an exceptional ruler, following Baibars' policy of holding the Mongols in check, keeping the pressure on the Franks and strengthening diplomatic links with the West. He routed the Mongol army at Homs and established a truce lasting the rest of his reign. Turning his attention to the Franks he dealt a number of devastating blows, capturing the fortresses of Markab and Tripoli in Syria. Like Baibars, he formed a number of diplomatic links with the West, having good relations with the emperor of Constantinople, the emperor Rudolph of Habsburg and the kings of France, Castile and Sicily. He established trade links with Genoa and even formed military alliances with Castile and Sicily. Something of this contact with the West is reflected in the building complex which forms his mosque, *madrasa*, *maristan* (hospital) and mausoleum (1284–5). This major monument was not only an architectural masterpiece, but also a considerable innovation, combining a number of functions that united the spiritual, intellectual and medical needs of the community under one roof. It represents a new building type in which the mosque serves as an oratory, operating in a more open-ended and integrated manner with other purpose-built units.

The outstanding feature of this building now is the mausoleum, but in its day it was famous for its *maristan*. Qala'un had fallen ill with colic in Damascus and was successfully treated there at the famous *maristan* of Nur al-Din. He vowed that if he recovered he would build a similar hospital in Cairo. Since Fatimid times, Cairo had been a renowned centre for medical studies, attracting physicians from all

over the world. The intellectual climate of al-Hakim's reign had been stimulated by the open correspondence and debate of two leading physicians, Ali ibn Ridwan of Cairo and Ibn Butlan of Baghdad. Maimonides, the great Jewish philosopher and physician, travelled from Andalusia to Cairo where he became physician to Salah al-Din. Medical research in Cairo and Damascus was closely linked in the thirteenth century, and for a time the physician Abd al-Rahman al-Dakhwar had administrative responsibility for medicine in both cities. His disciple, Ala al-Din ibn Nafis, wrote commentaries on Hippocrates and ibn-Sina (known in the West as Avicenna – 980–1037), and among his extensive writing on medicine and surgery, he explained the circulation of the blood centuries before William Harvey.[7]



ABOVE: *Maristan* of Nur al-Din, Damascus.

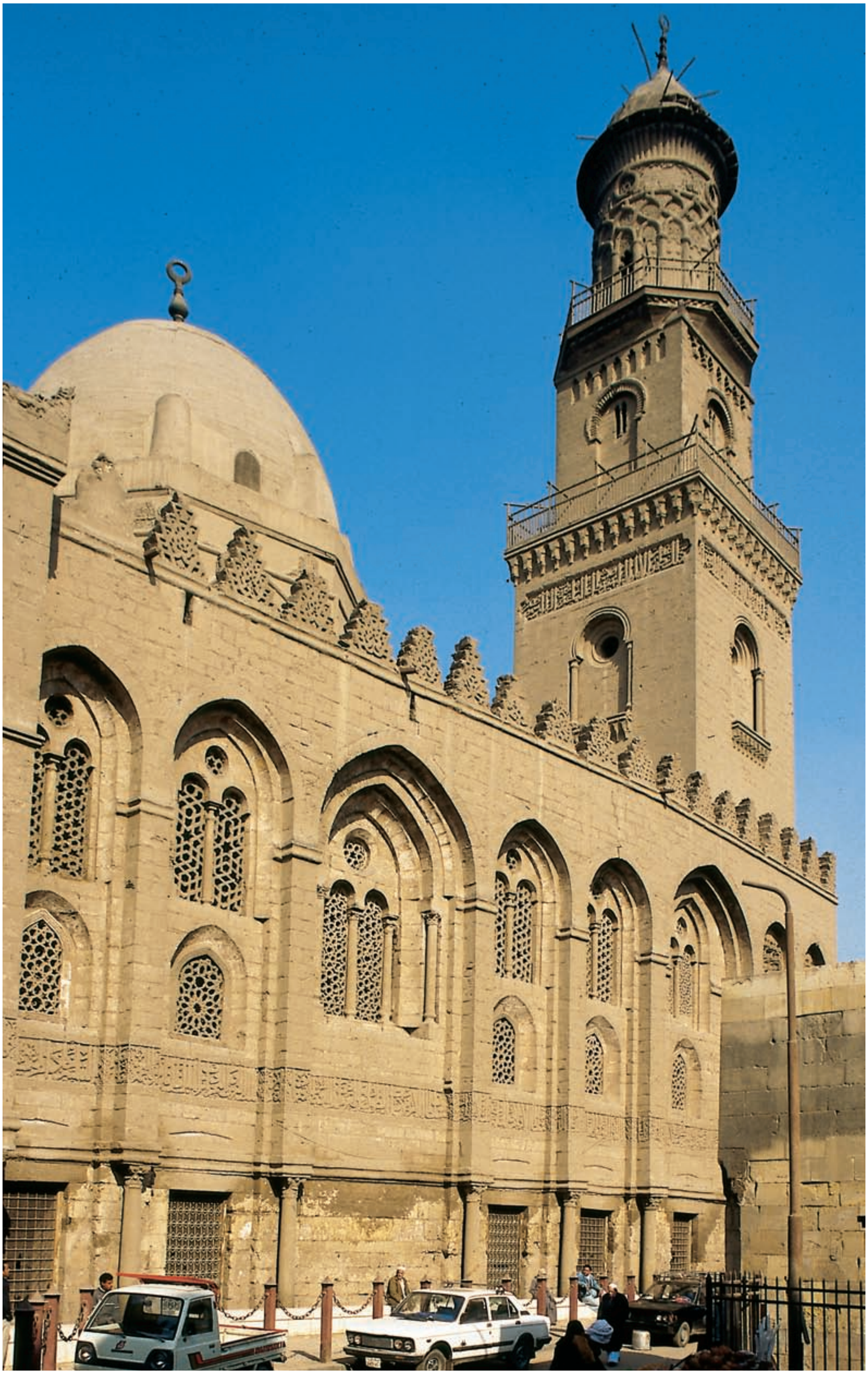
The plan of the hospital was loosely based on Nur al-Din's *maristan* in Damascus. It was built on the site of the smaller western palace and, as previously observed, some of the timber decoration in that palace was used in this building. A modern ophthalmic hospital now occupies most of the site of the *maristan*, and except for some remains of the *iwan*s, little is left of this structure, which was larger than the mosque, mausoleum and the *madrasa* put together. All four buildings formed an L-shaped plan and the *maristan* occupied its base. At the heart of the *maristan* was a cruciform plan with four *iwan*s facing a large central court. Fountains once stood in the eastern and western *iwan*s and the main hospital wards were situated off the corners of the central court. There was an extensive complex of rooms including a library, lecture rooms, laboratories, kitchens, a pharmacy, a mortuary, baths, latrines and storerooms. It was a remarkable institution, famous for the excellence of its research and learning as well as its health care. Its major activities are summarized by Behrens-Abouseif as follows:

> Its foundation deed states that it was dedicated to all Muslims of both sexes and all ages of whatever social or moral position, with no distinction made except that priority should be given to those most in need of care. The hospital was divided into sections for men and women, and each patient was entitled to a bed made of wood or palm slats, with pillows and covers. The administrator of the foundation, who also handled financial matters, took care that each patient was given good proper food and medicine. He supervised the laboratories

> where medicines were mixed and bottled in adequate, but not excessive quantities. The kitchen prepared juices and broth, chicken and meats for the patients, and each patient received his portion in an individual, covered vessel, fanned in the summer. Drinks were served in individual cups. Each patient had his own chamber pot. The laundry of the patient was done by the hospital. Physicians met to discuss each patient's case and treatment, and followed up his progress. The ophthalmologists consulted the general physician. Doctors were present at all times, together or in shifts. All services were generously provided and free of charge.[8]

As well as the segregation of the sexes, the wards were isolated into units specializing in most known diseases. Entertainment for the patients was provided by story-tellers, and Muslim medicine followed ancient Greek practice in providing music for solace and therapy. The library, staffed by a librarian and five assistants, had a distinguished collection of medical, theological and legal books and was open to all. Public lectures were also promoted in the *maristan* by the law schools. As a part of its wider educational and charitable work, sixty orphans were housed and educated at a nearby school.

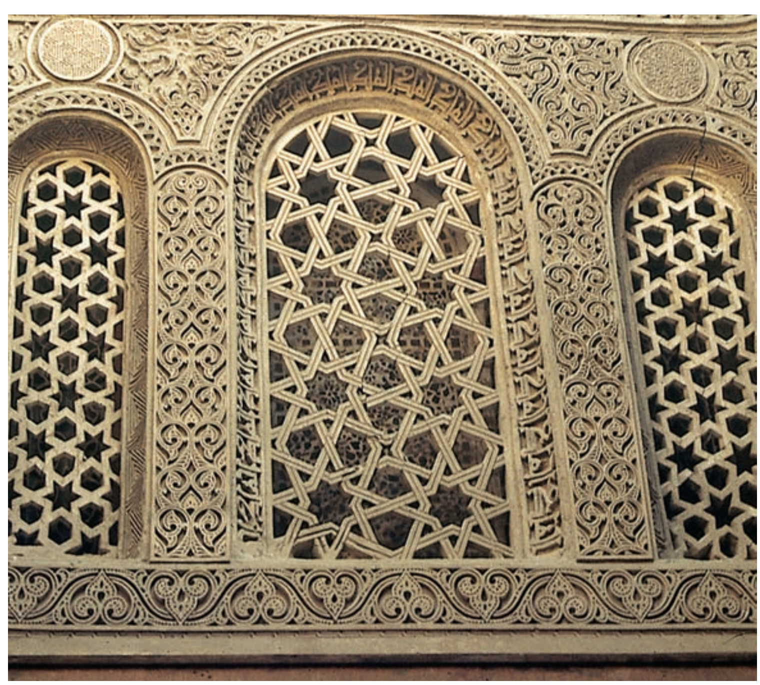
The main exterior façade and minaret of the Qala'un complex provides an impressive architectural ensemble on al-Mu'izz street. What is striking is the Western Gothic character of the pointed arched recesses, buttresses and windows. There are three tiers of windows: rectangular on the ground floor, pointed on the second, and the paired and surmounted by a central oculus (circular window) on the third. The ground-floor windows have iron grilles, but the upper windows contain beautiful stucco lattices of interlacing stellar patterns. The composition of the third tier windows with their moulding and colonnettes is distinctly Western, and it is only the grilles that reveal their Islamic identity. The façade retains two other notable Islamic features, the crenellation of stepped merlons and a band of *tiraz* (named after the woven fabrics) Naskhi script running horizontally between the first and second tiers of windows. The strong Western influence in the façade may be explained by the Crusades, but Creswell suggests Sicily as a possible influence.[9] Such a suggestion is plausible because Qala'un maintained strong diplomatic links with Sicily when he formed a defensive alliance with King James I.



LEFT: The minaret and dome of the Sultan Qala'un complex.

The minaret has a sturdy appearance characteristic of early Mamluk architecture. It consists of two rectangular shafts built of stone, supporting a brick cylinder capped with a domed helmet. The first two storeys of the minaret were restored by Sultan Lajin, and the third was rebuilt by Sultan al-Nasir Muhammad after the earthquake of 1303. Each side of the first shaft has a horseshoe-arched recess flanked with colonnettes and pierced by an oculus. Above this is a horizontal band of Naskhi under a cornice of *muqarnas* supporting the first balcony. The second shaft is similarly decorated with horseshoe-arched recesses, but these have no colonnettes and the arches have cushion voussoirs. The horseshoe arches indicate the influence of North African and Andalusian architecture similar to that already observed in Lajin's other restoration work on the minaret of the mosque of Ibn Tulun. The third shaft displays a delicate tracery of blind arcades which link together to form a complex interlace under a fluted cornice that curves out like the open papyrus flower of a Pharaonic capital.

The entrance in the façade leads into a long passageway separating the mausoleum from the rest of the complex. At the end of this passage a doorway on the right leads into a small open courtyard surrounded on three sides by single-aisled *riwaq*s. Above the *mashrabiyya* entrance to the mausoleum the façade is covered with some of the finest stucco of the period. The sharp interlacing stellar



RIGHT: Stucco over the entrance to the mausoleum of Sultan Qala'un.

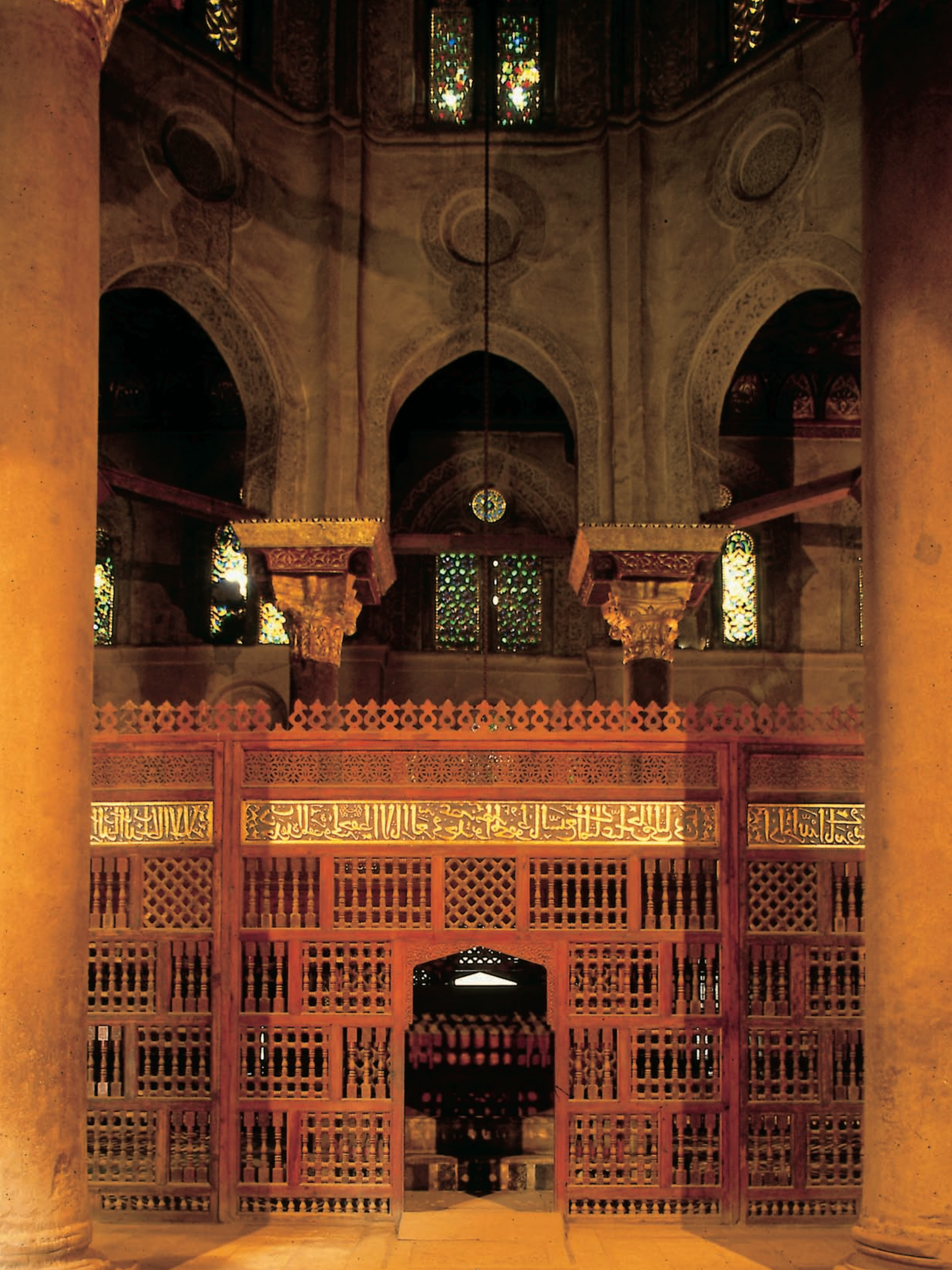
patterns of the central window grille are beautifully framed with Kufic, and the other windows are moulded and surrounded by scrolling lace-like arabesques. The mausoleum is almost as large as the mosque and *madrasa* put together and it is one of the great masterpieces of Cairo's medieval architecture. Its plan consists of an octagon within an approximate square. The tall dome sits directly on an octagonal drum, and there is no zone of transition. The drum is pierced by eight paired windows with oculi, and rests on a tall intermediate octagonal structure with arches springing from pairs of alternating columns and piers. These antique pink granite columns have gilded Corinthian capitals supporting flat impost blocks, and the whole structure is braced with wooden tie-beams.

The mausoleum is reminiscent of the Dome of the Rock in Jerusalem, but this interior is much taller in its 'Gothic' proportions, and its mood is more restrained and sombre. The Dome of the Rock is sumptuous in its colour, but in this dim interior colour resonates in the shadows or breaks through with gem-like intensity in the dominant green, yellow and blue of the stained glass windows. The decoration is disciplined and organized so that dense areas of gilding and colour are offset by the broader, neutral tones and etched surfaces of monochrome stucco. The dado is made up of vertical panels of marble, mother-of-pearl and mosaic, with the name of Muhammad repeated regularly in a rectilinear Kufic format. The upper reaches of the interior are adorned with golden arabesques, mosaic and stucco, and the ceiling of the ambulatory is richly gilded and coffered with sunken octagons. The piers are decorated with gilded borders and Naskhi inscriptions, and the arabesques are painted in red, green and gold. Providing a more passive contrast, fine stucco arabesques, equal in quality to those on the exterior façade, festoon the upper windows, frame the arcades and fill the soffits of the arches.

The *mihrab* (removed for restoration at the time of writing) is 7 metres high and one of the largest and finest in Cairo. It is the visual climax of the mausoleum, framed at the top with rich bands of gilded Naskhi and surmounted by a pair of stained glass windows. It is flanked with triple columns and the hood is outlined with a zigzag of joggled voussoirs. The deep niche, with its horse-shoe plan, is filled with tiers of small blind arcades and intricate geometric patterns in marble mosaic and mother-of-pearl. The other distinctive feature in this remarkable interior is the huge *mashrabiyya* screen installed by Qala'un's son, Sultan al-Nasir Muhammad. Set within the pink granite columns, it partitions the



ABOVE: Detail of the *mihrab* in the mausoleum of Sultan Qala'un.

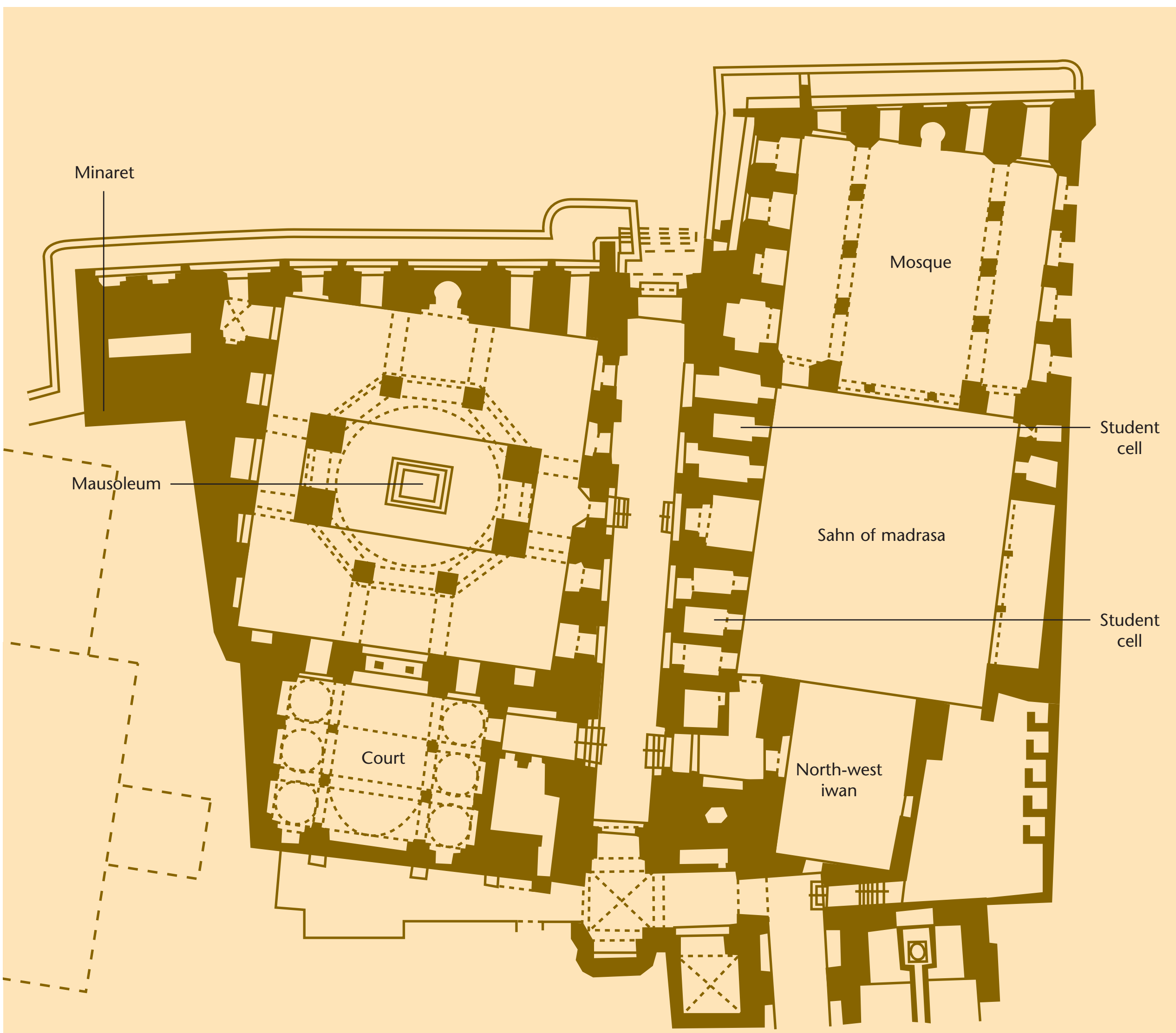


whole space, joining the four piers and enclosing the wooden gabled cenotaph that covers the graves of Qala'un and al-Nasir Muhammad. Al-Nasir Muhammad chose to be buried here rather than in his own mausoleum next door.

The *madrasa* and mosque provide open-ended extensions at opposite ends of the *sahn*. This type of open-ended composite plan is a development of the *iwan* court already observed in al-Salih's *madrasa* opposite, and it was to become a major feature of Mamluk architecture. Little remains of the *madrasa*, but its four *iwan* cruciform plan is evident, and the three-storeyed barrel-vaulted student cells have been preserved on the north-eastern side. The mosque,

OPPOSITE: Interior of the mausoleum of Sultan Qala'un.

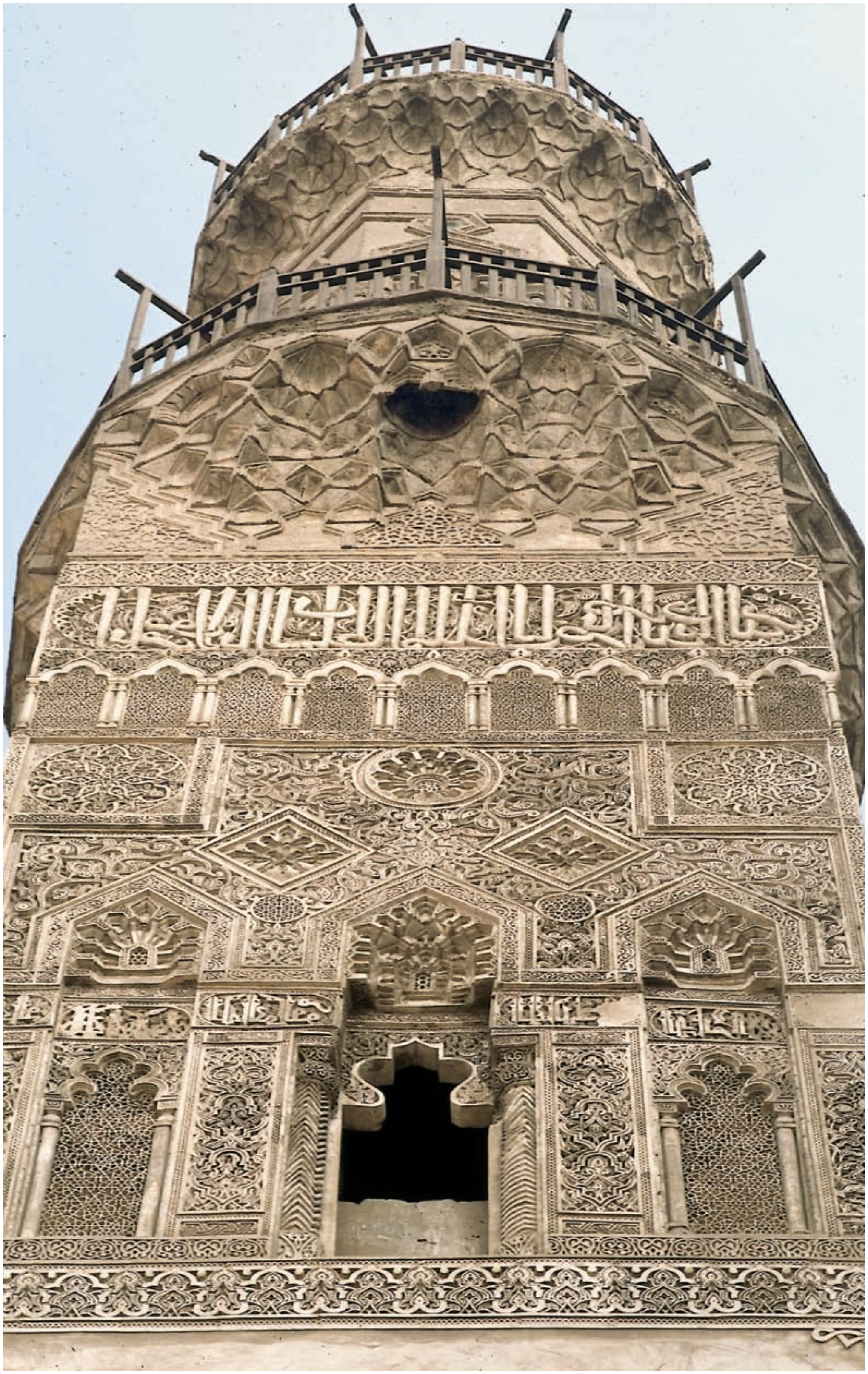
BELOW: Plan of *madrasa* and mausoleum of Sultan Qala'un.



or oratory, forms the *qibla iwan* with an open façade consisting of two storeys of triple arches, and the interior space is partitioned like a basilica with nave and side aisles formed by an arcade of four arches running perpendicular to the *qibla* wall. The pink granite columns support impost blocks and tall piers from which spring the arches. The strong vertical thrust of these stilted arcades is echoed in the fenestration of the *qibla* wall, where three tiers of pointed windows are arranged above the *mihrab*. Like the mausoleum *mihrab*, this one is decorated with blind arcading, rich marble, mosaic and mother-of-pearl. The arabesque consists of vine-scrolls and cornucopias, and Behrens-Abouseif suggests that the mosaic decoration, both here and in the mausoleum *mihrab*, might be evidence of Byzantine influence. This could also account for the composition of the façade and the basilican plan.[10] If this is so, it adds to the eclecticism of the building in which, to quote Hillenbrand, 'the entire Mediterranean world has been systematically trawled for ideas so as to make this foundation a monument truly representative of its time.'[11]

The reign of Qala'un's successor, al-Ashraf Khalil, was short and brutal, but his momentous capture of Acre in 1291 brought an end to the Crusader presence in the Levant. Following its loss, the remaining Crusader cities of Tartus, Beirut, Sidon, Tyre, Athlith and Haifa fell like dominoes, and the Franks finally withdrew, eventually finding refuge in Cyprus. Khalil was succeeded by the eight-year-old al-Nasir Muhammad, whose long reign of forty-seven years was twice usurped in its early stages. He nevertheless provided a degree of stability during a period when the Mongols remained a constant threat. After the devastation of their early conquests, the Mongols had established the vast Ilkhanid empire in Anatolia, Iraq, Persia, Transoxania and Afghanistan. In 1299 they invaded Syria, capturing Aleppo and Damascus, but although the Mamluks subsequently regained this territory, the Mongol threat did not diminish until al-Nasir Muhammad's decisive victory over them at Marj al-Suffar in 1303. A peace treaty with the Ilkhanids was finally concluded in 1323, the outcome of which led to increased trading opportunities between Egypt, the Ilkhanid empire and China. This had a significant impact on Islamic art and design. Despite the turbulent events that marked his three reigns, al-Nasir Muhammad's grip on Egypt strengthened and he became one of the great patrons of art and architecture.

The *madrasa* and mausoleum (1295–1303) which bears al-Nasir Muhammad's name was begun by Sultan Kitbugha, the



LEFT: The façade of the *madrasa* of al-Nasir Muhammad.

Mongol viceroy and regent, who briefly usurped the throne from al-Nasir Muhammad in 1295. Its most telling feature is the marble Gothic doorway, a Crusader trophy, taken from the church of St George in Acre. It was originally brought from Acre and placed in the house of an amir, but Kitbugha saw it and installed it in his *madrasa*. When al-Nasir Muhammad resumed power he completed the building, and it now forms a small architectural gem sandwiched between Qala'un's complex and the *madrasa* of Sultan Barquq on al-Mu'izz street. Its most distinctive feature is the three-tiered minaret displaying some of the most intricate stucco work of the period, thought to be the work of Andalusian or North African craftsmen. This lace-like decoration completely covers the first shaft, the lower half of which is composed of three tall recessed panels with fluted keel-arched hoods. These panels are further indented in the lower half by lobed arched niches and the central panel is pierced by a small window. Above the panels is an intricate pattern of lozenges and rosettes, and under the *muqarnas* cornice is a band of Naskhi over a horizontal blind arcade of lobed arches. The two remaining shafts are octagonal in section. The second, with its keel-arched panels, was built a century later, and the third, made of wood with a conical top, is Ottoman.



ABOVE: The *sahn* of the *madrasa* of Sultan al-Nasir Muhammad.

Like the Qala'un complex, a central corridor divides the *madrasa* from the mausoleum. The mausoleum is much smaller than Qala'un's and contains the bodies of his mother and eldest son. The *madrasa* has recently been much restored and it forms a cruciform plan of four *iwan* vaults of unequal size facing a *sahn* with a central fountain. All four *madhahib* were taught here, and the *qibla iwan* (Maliki) and north-western *iwan*s (Shafi'i) are much deeper than those on the south-western (Hanbali) and north-eastern (Hanafi) sides. The *qibla iwan* has a well-preserved *mihrab*, 10 metres high, with some superbly cut and drilled stucco work. This decoration has been attributed to Persian craftsmen from Tabriz, and Behrens-Abouseif suggests that it may have been installed after the *madrasa*'s completion in 1303 when hostilities between the Mamluks and the Ilkhanids ceased.[12] Diplomatic relations between Cairo and Tabriz were later put on a more positive footing when al-Nasir Muhammad married the Mongol princess Tulbiya and signed the final peace treaty with the Ilkhanids in 1323.

Tabrizi influence has also been noted in the minarets of al-Nasir's mosque in the Citadel (1318–35). This is one of the few congregational mosques of the Bahri Mamluk era and it served as the principal royal mosque in the Citadel up until Ottoman times.



It is a free-standing hypostyle structure with two minarets, begun in 1318, but rebuilt in 1335 with much higher walls. Its plain dressed stone exterior gives it an austerity that contrasts markedly with the light fragility observed in the decoration of al-Nasir's *madrasa*. The severity of this cubic exterior is broken only by the rows of pointed windows, the round-headed crenellation and the projections of the three entrances. The main entrance on the north-western façade, with a trilobed *muqarnas* hood, faced the royal palace and was used by the sultan's officials. The entrance on the north-eastern side, facing the Bab al-Qulla and military compound, served the army, and situated on the southern corner of the prayer hall is al-Nasir's private entrance, with its sunburst motif and *ablaq* (two-toned) masonry.

The two stone minarets are quite unusual. The taller, over the entrance on the north-western side, is made up of three cylindrical

ABOVE: The mosque of Sultan al-Nasir Muhammad.

shafts separated by two balconies supported on *muqarnas* corbels. The first shaft is patterned with chevrons zigzagging vertically up the column, and the second has chevrons banded horizontally. The third shaft is tapered and ribbed, terminating with a bulbous ribbed dome. Under the dome is a band of faience inscription in white and blue, and the rest of the shaft and dome is principally covered with green mosaic tiles. The first, lowest, shaft of the other minaret is rectangular, the second cylindrical, and the third is an open hexagonal kiosk terminating with a similarly tapered shaft surmounted by a bulbous ribbed dome. The first two shafts are plain but the top of the third is decorated with the same faience as the other minaret. Al-Maqrizi records that at this time craftsmen from Tabriz set up workshops in Cairo, and Michael Meinecke has identified one thirteenth-century miniature from Tabriz showing similar bulbous domed minarets.[13]



BELOW: The minaret of the *madrasa* of Sultan al-Nasir Muhammad.

The interior follows the traditional plan of the hypostyle mosque and there is little sense of innovation. The arcading and windows around the *sahn* are uniform, and there is no differentiation on the *qibla* side. The crenellation above the inner façades is stepped, unlike the round-headed crenellation on the exterior, which adds to its fortified character. The prayer hall is four aisles deep with the arcades running parallel to the *qibla* wall, and the three *riwaq*s are two aisles deep. Like the mosque of Baibars, the dome over the *mihrab* covers nine bays, but this one, with a diameter of 15 metres, is much smaller. The original, made of wood and covered with Persian green and blue ceramic tiles, collapsed in 1531. It rests on wooden *muqarnas* pendentives and the whole superstructure is supported on antique granite columns. Perhaps the most distinctive features of this interior are the *ablaq* masonry in the voussoirs of the arcades and around the windows and the variety of antique columns with capitals taken from Pharaonic, Roman and Coptic sources. The interior decoration, consisting of a

marble dado 5 metres high, was removed to Istanbul by Sultan Selim soon after the Ottoman conquest.

Compared to other contemporary buildings this mosque is noteworthy for its conservatism, restraint and discipline. In decorative terms it is a minimalist building, with no keel-arched windows, panels, arabesques, sunbursts, rosettes or lozenges. Its only articulation consists of the controlled manipulation of *ablaq* voussoirs, and richness and diversity of material are achieved principally through the use of recycled antique columns. It forms a sacred intermediary between two secular domains, the court and the barracks, and it appears to draw its ethos from the presence of the military, rather than the luxury of the court. Nevertheless, court architecture was a significant preoccupation for al-Nasir Muhammad, and his other major architectural contribution to the Citadel was the palace complex (1313–15). The remains of this were destroyed during Muhammad Ali's rebuilding of the Citadel in the nineteenth century, but we have some vivid illustrations of it in *Description de l'Egypte*.

One is tempted to question the accuracy of scale in these intensely Romantic, Piranesi-like engravings, but the ruins were awesome, and one French scholar described them as more impressive than the mosques of Ibn Tulun and Sultan Hasan.[14] Like the Citadel mosque, huge red Aswan granite columns were used in the palace, most notably in the domed cubic pavilion of the Dar al-Adl, or Hall of Justice (called the Divan of Joseph in *Description de l'Egypte*). This formed the ceremonial heart of the palace where the sultan received ambassadors and held public audience. Nearby was the Ablaq palace, so called because of the yellow and black stone used in its construction. It consisted of two *iwan*s facing a courtyard and is described by the fourteenth-century historian Umari as follows:

> From the entrance one passes through corridors to a lofty palace of splendid construction with two *iwan*s, the largest being the northern, which overlooks the stables of the sultan and from which one can see the horse market, Cairo and its suburbs as far as the Nile and beyond to Giza. The second *iwan* has a special door for the exit of the sultan and the court to the Hall of Justice. This palace connects with three other palaces, which are reached by a staircase with windows containing iron grills, overlooking the city. The inner palaces communicate with the harim and the private

> apartments of the sultan. Within all these palaces are dados of marble and gold mosaics depicting trees and houses, heightened with mother-of-pearl and coloured paste. The ceilings are all gilded and painted with lapis lazuli. The light comes through windows filled with coloured glass, resembling necklaces of precious stones. The floors are inlaid with marble transported from all the countries in the world.[15]

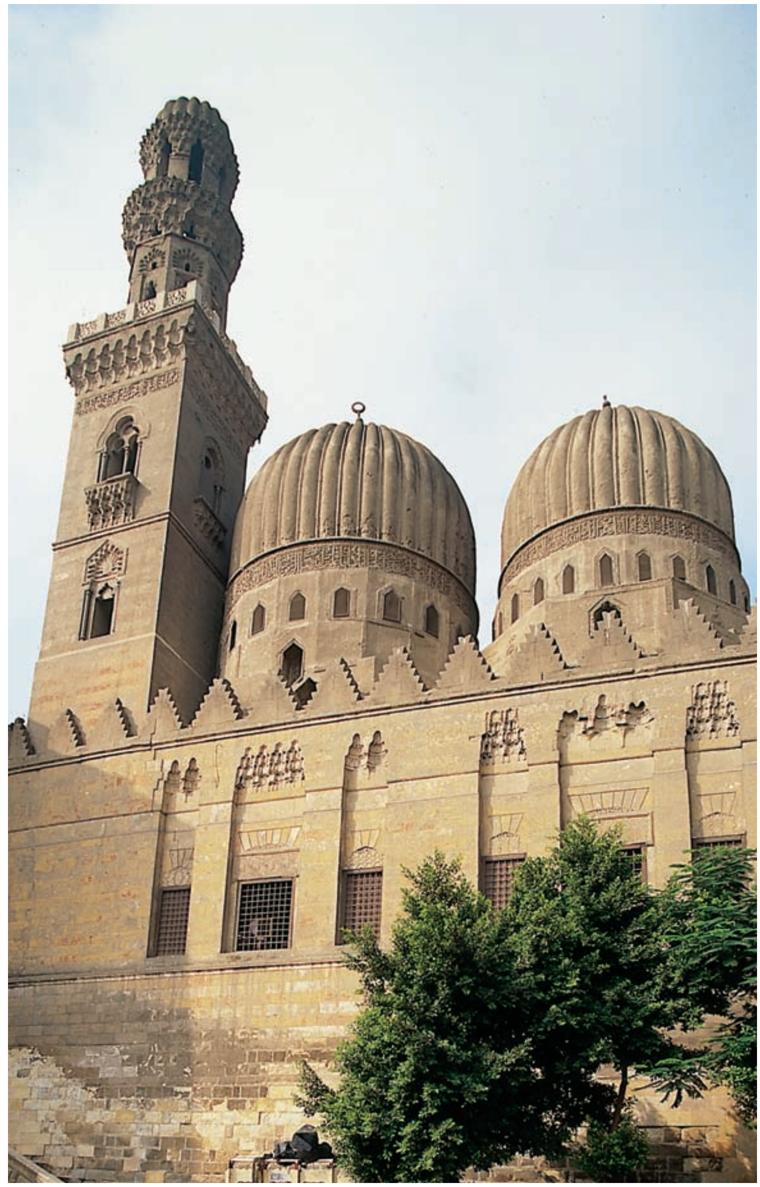
The splendour of such interior decor is recaptured in Qala'un's mausoleum, but the mosaics of houses and trees call to mind the paradisial imagery of the mosaics in the *sahn* of the Great Mosque at Damascus, and it is worth bearing in mind that these mosaics in Islam's oldest congregational mosque (715) provided the inspiration for the interior decoration of Baibars' mausoleum in Damascus (1278). The private apartments of al-Nasir Muhammad's palace, the Dar as Sultaniya, were extensive, with a mosque and various pavilions and apartments set in small gardens, serving the men's quarters and the harem. The harem contained separate palace units for each of the sultan's wives, as well as accommodation for children, concubines, slaves, eunuchs and servants.

The early years of al-Nasir Muhammad's reign were turbulent (1294–5). He came to the throne when he was eight years old, but after a year he was deposed by the viceroy Kitbugha, who in turn was deposed by Lajin. Lajin was a popular sultan who generously patronized the arts and restored the mosque of Ibn Tulun. This was done in fulfilment of a vow he made while taking refuge in the mosque following his part in the assassination of Sultan Khalil. He vowed that if he survived and prospered he would restore the mosque and endow a *waqf* (land or property given to establish a charitable institution). However, his popularity at court did not last long and he alienated his former supporters by promoting his favourites, who had an adverse influence on him. As a consequence he was murdered, and in order to prevent further bloodshed the fourteen-year-old al-Nasir Muhammad was restored to the throne. Because of his youth, his position as sultan remained nominal during his second reign (1299–1309) and the real power was wielded by the amirs Salar and Baibars al-Jashankir. During this period al-Nasir Muhammad was kept in straitened circumstances and served as a mere puppet, while the two amirs increasingly quarrelled in their competition for power. Unable to act in these circumstances,

al-Nasir Muhammad finally abdicated and withdrew to Karak while Baibars, winning the power struggle against Salar, became sultan with the support of the Burji Mamluks. The reign of Baibars was unsuccessful, and during his absence al-Nasir Muhammad took the opportunity of building up support in Syria and Egypt, so that when Baibars finally abdicated, al-Nasir was quickly restored to the throne by popular acclamation.

Now aged twenty-five, al-Nasir began his third reign (1310–40) with a vengeance, firmly establishing his own authority and purging the court of those amirs who had exercised power over him during his early reigns. Baibars was executed by strangulation and Salar starved to death in prison. Salar's remains were interred in the mausoleum which now forms a part of the *khanqah-madrasa* (*madrasa* with accommodation for Sufi dervishes) of Amir Sanjar al-Jawli (1303–4), a monument dedicated to the memory of both of these men. Salar and Sanjar were life-time friends who held the highest offices of state, although Sanjar avoided the political intrigues which brought the downfall of his friend. Following Salar's death, Sanjar became governor of Gaza, and after a fall from grace in the 1320s, he resumed his career as governor of Hama and eventually died in 1344. The *khanqah-madrasa* of Sanjar stands near the mosque of Ibn Tulun adjacent to Salar's palace on the site of the old barracks. It is an impressive building with a plain edifice relieved only on the upper storey by six windows with iron grilles set in square-headed recesses. The vertical thrust of the superstructure above the roof-line provides a powerful profile of two lofty ribbed domes, of unequal size, arranged along a single axis behind the tall *mabkhara* minaret.

The two domes cover the mausolea, and as Hillenbrand has observed, the principal exterior forms give little indication of its function as a *madrasa* and *khanqah*.[16] The tall domes are made of brick set on high drums, so that they achieve maximum visual prominence above the crenellated cornice. Under the rim of each dome is a stucco band of Naskhi and the east and west drums respectively form twenty-four- and twenty- sided polygons, pierced with keel-arched windows in each face. The three-tiered minaret consists of rectangular, octagonal and cylindrical shafts. The first forms a tall tower with two tiers of windows on each side. The upper windows, occupying three sides of the shaft, rest on *muqarnas* sills and consist of double lights and oculi set in trilobed arches. On the south-east side there is a horseshoe panel with cushion voussoirs surrounding an oculus. It is flanked with colonnettes and also rests



RIGHT: The *khanqah-madrasa* of Amir Sanjar al-Jawli.

on a *muqarnas* sill. The lower section of the shaft has fluted keel-arched windows on three sides, and the south-east side has a door set in a trilobed arch. As with other *mabkhara* designs, the two upper storeys have tall narrow openings set in fluted keel-arched recesses, and the *muqarnas*, forming and supporting the balconies and cornices, provide intermittent crystalline bands of relief under the ribbed dome.

The *khanqah-madrasa* was built on a steeply inclined site and its asymmetrical interior plan operates on a number of different levels. Steps lead up to the cross-vaulted entrance vestibule and a

further flight of steps approaches another vestibule with passages giving access to the *madrasa* and mausolea. The *madrasa* consists of a roofed court with a small cross-vaulted *iwan*, alcoves and cells. On its eastern side is a large barrel-vaulted *iwan* with a raised floor forming the prayer hall with a *minbar* and *mihrab*. Access to the mausolea is off a long cross-vaulted corridor leading to a small tomb chamber covered with a dome, the earliest stone dome made in Cairo. The mausolea are to the right of the corridor and on the left-hand side is an arcade opening onto a court seen through finely carved open-work stone screens. Traditionally such screens were cut in stucco, but these and the stone dome provide significant evidence of the emerging technical virtuosity in stone cutting and construction.

Two entrances on the right-hand side of the corridor lead to the mausolea, which are connected by a pair of doors. The mausolea are domed cubes with octagonal zones of transition made up of three tiers of *muqarnas* squinches alternating with windows of the same shape containing intricately carved geometric stucco grilles. The multifaceted drums are pierced with keel-arched windows and encircled by bands of Naskhi, and the insides of the domes, unlike their ribbed exteriors, are smooth and plain, except for medallions placed at their apexes. Salar's mausoleum is the larger and more elaborate, but both tomb chambers have ornate *mihrab*s. One has a fluted keel-arched hood, and the other a rich tile mosaic similar to that of Qala'un's mausoleum. The fact that these mausolea have a clear *qibla* alignment has led to some speculation as to why this was not the case in the prayer hall. It raises some questions about the original purpose of the interior court and *iwan*s.

The prayer hall *mihrab* is a later addition and its awkward angle suggests that this *iwan* might not have originally been intended as a prayer hall. The foundation inscriptions vaguely define the building as 'a place', and all that al-Maqrizi has to say is that the *madrasa* taught the Shafi'i *madhhab* and the *khanqah* provided accommodation for Sufi dervishes. Which was which in terms of architectural space is not clear, and this kind of ambiguity becomes an increasing factor in Mamluk architecture. The division between *madrasa* and *khanqah* has always been somewhat ambiguous in Egypt. Salah al-Din established the first *khanqah* in Cairo, the Dar Sa'id al-Su'ada, but it increasingly became the practice to accommodate the Sufi orders within the precincts of the *madrasa*. On the face of it this made sense because both institutions had a common purpose in teaching. Teaching had always been at the heart of the spiritual life of the Sufi

orders and many of the early *madrasas* in Persia had their origins in Sufi foundations. However, Sufi teaching was based on a mystical theology that was frequently at odds with the law-based thinking of Sunni orthodoxy. The Sufis were much esteemed, but their manner of organization and the transcendental nature of their theology were perceived by the orthodox as potentially subversive.

Nothing remains of Salah al-Din's Dar Sa'id al-Su'ada, and the oldest surviving *khanqah* in Cairo is that established by Salar's partner and rival, Baibars al-Jashankir (1307–10). Despite his short and turbulent reign, Baibars was a generous patron of architecture, as his restoration work on the mosque of al-Hakim shows, particularly

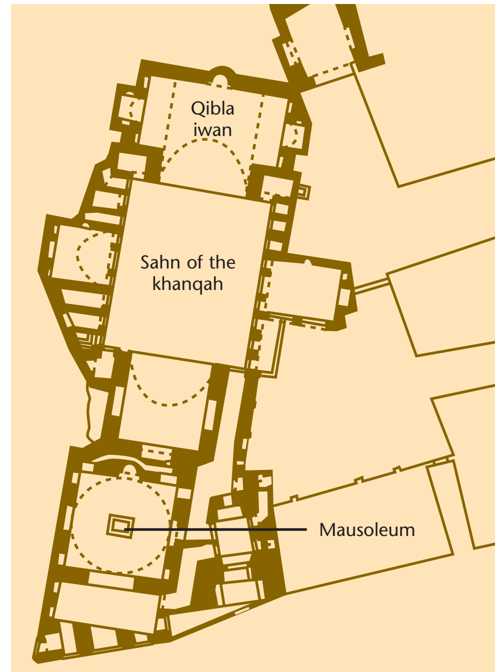
BELOW: The *khanqah* of Baibars al-Jashankir.



the beautiful *mabkhara* minarets he added to that building. His *khanqah* is built in the Jamaliyya district on the site of the Dar al-Wizara, the former residence of the Fatimid viziers. A relic of this period is a window in the mausoleum vestibule, said to have been brought from the palace of the Abbasid caliph in Baghdad and incorporated in the Dar al-Wizara during Fatimid times.

The view of the *khanqah* from the street gives no indication of the extent of the building complex behind, which originally consisted of a tomb, *khanqah*, *ribat* (hospice), ablutions court, kitchen and shops (only the tomb and parts of the *khanqah* have survived). Like the *khanqah-madrasa* of Amir Sanjar its exterior conveys only the presence of a domed mausoleum and minaret. The entrance, with its large semi-circular arch of cushion voussoirs, is very impressive. It frames a marble recess with a *muqarnas* semi-dome and doors covered with bronze panels decorated with geometric patterns and inscriptions. The sturdy minaret is a disciplined structure consisting of a rectangular tower base, supporting two cylindrical shafts and a ribbed dome. The decoration on the minaret is sparing, consisting of fluted keel-arched niches on the first storey, narrow recesses on the second and an open pavilion with a ribbed helmet dome at the top. It is the clusters of *muqarnas* that articulate the structure, particularly those on the first storey, which billow out, like a capital, supporting the balcony.

Besides the Abbasid window, Baibars used a lot of recycled building material from the Dar al-Wazara and other palaces in the area, and according to al-Maqrizi, a cave under one such palace yielded a cornucopia of marble.[17] This material was lavished on the mausoleum, whereas the *khanqah*, in keeping with a Sufi institution, was built more austerely. The dado panels in the mausoleum are black and white marble and the floor is paved with similar patterns. Decorated with polychrome marble and blind arcades, the *mihrab* is almost as large as that in Qala'un's mausoleum. It is framed at the top with a wooden inscription that extends round the walls of the chamber above the dado. The tomb of Baibars is set within a wooden screen, but he was only interred there after persistent petitioning from the amirs. Following his execution he was buried ignominiously in a humble setting in the Southern Cemetery. Eventually al-Nasir Muhammad grudgingly accepted the amirs' wishes, but he expressed his displeasure with Baibars by removing his titles from the *tiraz* inscription on the front of the *khanqah*. The internal plan of the *khanqah* is of the cruciform *iwan* type with cells overlooking the *sahn* arranged in three tiers. The *iwan*s are unequal in size and the largest, the vaulted *qibla iwan*,



ABOVE: The plan of the *khanqah* of Sultan Baibars al-Jashankir.

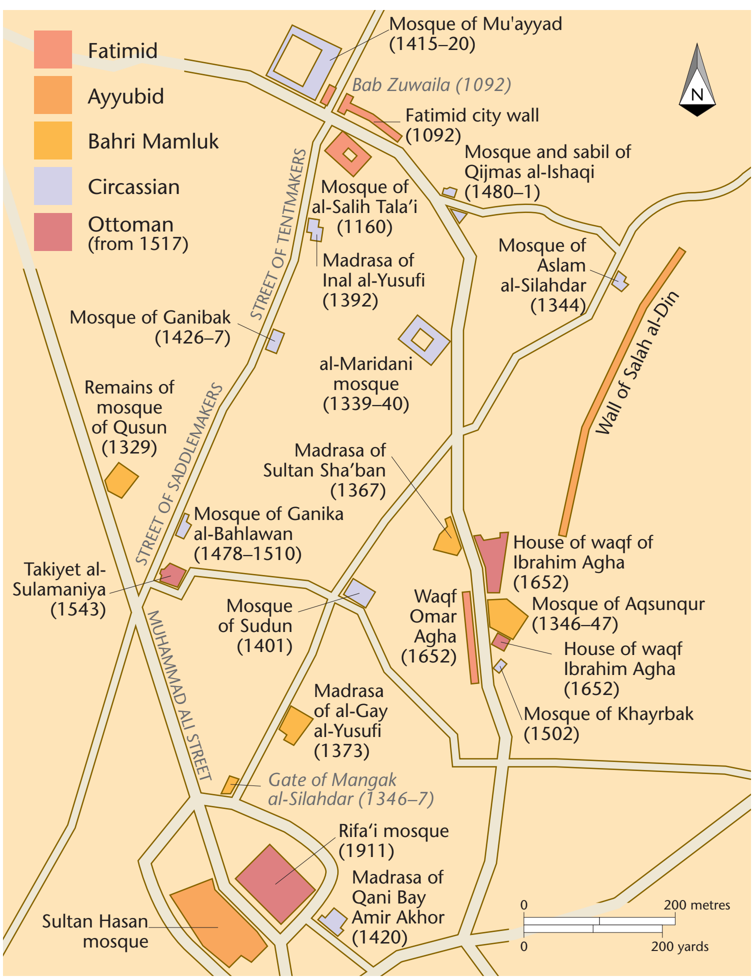
forms the oratory. Originally there was accommodation for up to one hundred Sufis, but like the *khanqah-madrasa* of Amir Sanjar, much of this residential accommodation has not survived.

Baibars' *khanqah* was a *waqf* foundation, and surviving deeds of endowment specify its charitable functions and give detailed information regarding the number of individuals accommodated, as well as the personnel employed to administer and maintain it. Residential accommodation in the *khanqah* was provided for one hundred bachelors, but up to three hundred non-residential Sufis, including married men, were also affiliated to it. Those appointed to administer and maintain the *khanqah* included the supervising sheikh, two prayer leaders, two prayer repeaters, an attendant, a water attendant, lamp-lighter, janitor, doorkeeper, water-sprinkler, cook, bread attendant, two broth attendants, weigher, eye doctor and washer. The hundred Sufi residents gave readings from the Qur'an, participated in the prayers, praised God and liaised with non-resident Sufis and members of the *ribat*. The *ribat* had one hundred male Muslim members, but residential accommodation was limited to house thirty. They had to be needy and worthy Muslims, and preference was given to the freedmen of the founder and his descendants, as well as retired military personnel. The maintenance and administration of the *ribat* was in the hands of a sheikh, a custodian in charge of cleaning and lamp-lighting, a doorkeeper, water-sprinkler, kitchen supervisor, cook and weigher. Those appointed to the mausoleum included an *imam* in charge of prayers, thirty-six Qur'an readers, two custodians, a doorkeeper, two caretakers and two *muezzin*s. In addition to this, the vestibule in front of the mausoleum provided space for a sheikh and reader to teach thirty students the *Hadith* (tradition).[18]

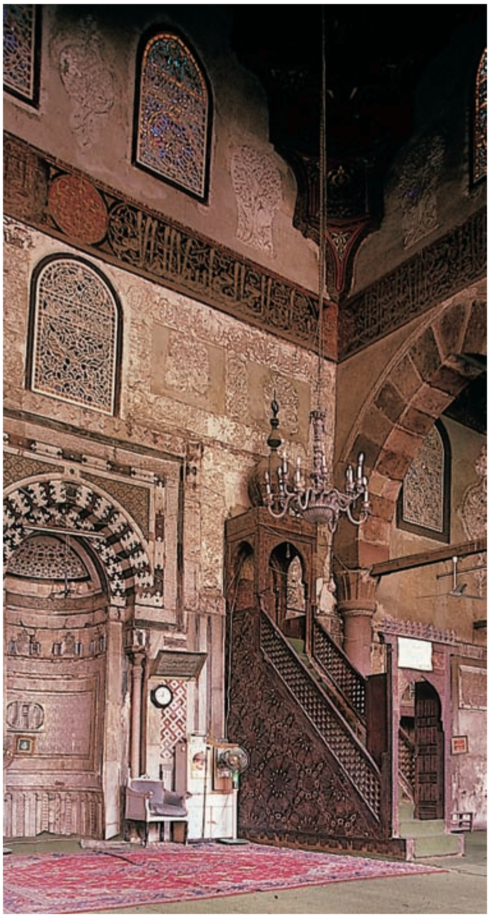
Undoubtedly the *khanqah*'s most distinguished director was the jurist and historian Ibn Khaldun. Born in Tunis, this great scholar served in the courts of Fez, Granada, Tlemcen and Tunis before settling in Cairo. He met most of the great figures of his day, including Tamerlane, for whom he wrote a brief history of North Africa. His greatest work was a three-volumed history of the Arab world with its influential prolegomena, the *Muqaddimah*. Unlike the chroniclers of the time, Ibn Khaldun radically changed historiography through his analysis of the geographical, climatic, social, economic and moral factors that determine history. He is acknowledged as the first historian to evolve a sociological explanation of history. He arrived in Egypt in 1384 and was appointed professor of Maliki jurisprudence, and then Grand Qadi of the Malikite *madhhab* by the Sultan al-Zahir Barquq.

The appointment of such a distinguished jurist to head a *khanqah* demonstrates how closely integrated at that time the Sufi orders were with orthodox teaching. He died in 1406 and is buried in the Sufi cemetery outside Cairo.

During the reign of al-Nasir Muhammad urban expansion filled the areas between the Citadel and the Fatimid walls near Bab Zuwaila, and the increasing population required the use of two new congregational mosques. Both mosques, the Maridani and the Aqsunqur, were built by sons-in-law of al-Nasir Muhammad. The mosque of al-Maridani (1340) has a hypostyle format similar to the Citadel mosque of al-Nasir Muhammad, although its exterior has nothing of the former's austerity. The *riwaq*s are two aisles deep and the prayer hall four, with a prominent dome over the *mihrab*. The stilted arcading facing the *sahn* is very high, with antique columns supporting tall piers from which spring pointed arches. Compared to



LEFT: Cairo from mosque of Sultan Hasan to Bab Zuwaila.





TOP: The mosque of al-Maridani.

ABOVE: The mosque of Aqsunqur.

other buildings, the façade above the arcading is reduced to a narrow horizontal strip, decorated in the spandrels by fluted keel-arched panels with alternating rosettes and lozenges. Oculi pierce the spandrels and there is a continuous moulding around the arches forming a small loop at their apex. The most distinctive feature in the *sahn* is the *mashrabiyya* screen that fills the arcades of the prayer hall.

All the columns are antique, taken from a variety of Pharaonic, Roman and Christian sources. Particularly fine are the red granite columns with gilded Ptolemaic capitals supporting the dome. The prayer hall is richly decorated with a marble panelled dado inlaid with mother-of-pearl and rectilinear Kufic inscriptions bearing the name of Muhammad. The *mihrab* is adorned with joggled voussoirs, niches, marble marquetry, inlaid mother-of-pearl and turquoise glass. Above this there is a stucco panel carved with a tree design, one of many which once covered the whole of the *qibla* wall above the dado. Like the al-Nasir mosque there is no conceptual innovation in this building although the decoration is of its period. One notable change, however, is the design of the minaret, which marks a significant departure from the *mabkhara* style. This minaret consists of two octagonal shafts, with balconies supported on *muqarnas* corbels, and a third shaft with an open octagonal pavilion crowned with a bulbous finial. This composition and the use of the bulbous finial became a defining feature of later Mamluk architecture.

The mosque of Aqsunqur (1347) is also known as the Blue Mosque, because of its profusion of Ottoman tilework. It is a mosque full of structural irregularities due to various restorations. The minaret once had the unique feature of four storeys, but they were reduced to three during restoration work at the beginning of the twentieth century. The composition of the minaret with its two cylindrical shafts is unusual. The first is plain and the second ribbed, and the third is an octagonal pavilion with a bulbous finial. Another unusual feature in the mosque is the use of heavy octagonal piers supporting cross-vaulted bays. It has been suggested that this vaulting system may be of Syrian influence because Amir Aqsunqur, who took an active part in the building of the mosque, had formerly been governor of Tripoli.[19] Much of the cross-vaulting was replaced with columns and flat roofs by Ibrahim Agha during the Ottoman restorations of 1652, and this accounts for the structural irregularity of the building. From the outset the mosque was planned asymmetrically when the mausoleum of the child sultan Kujuk, which predates the mosque, was incorporated into its structure. The mausoleum is



aligned to the street and not Mecca, so the bent plan of the mosque accounts for the wedge shape of the north-western *riwaq*.

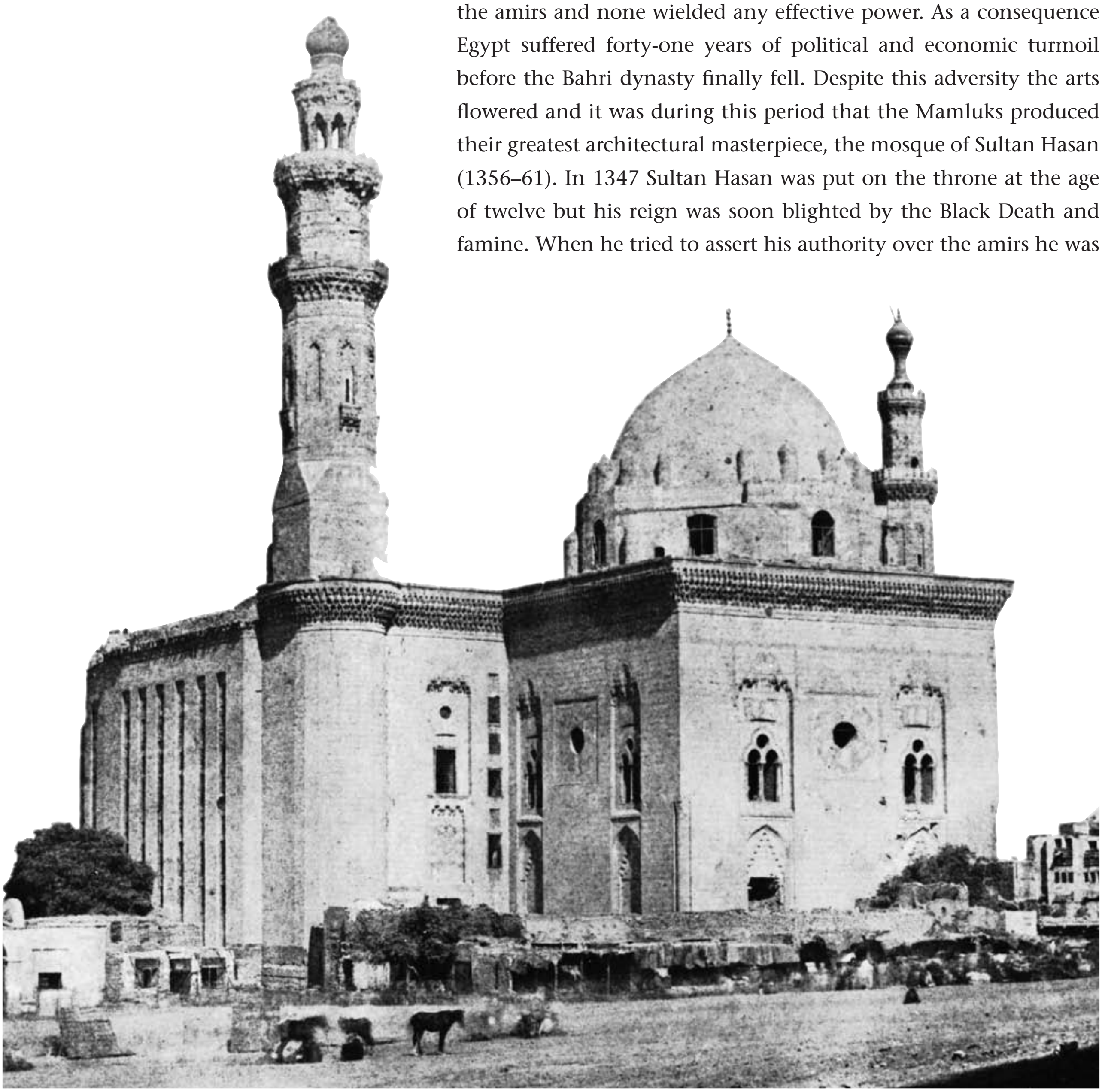
In the prayer hall there is a particularly fine *mihrab* framed with a double arch consisting of radiating fretwork-patterned joggled voussoirs. The hood is white marble and the rest is decorated with trefoil arcades and panels of polychrome marble. The white marble *minbar*, with its light arcaded canopy, bulbous dome and coloured marble side panels provides an elegant companion to the *mihrab*. The use of rich, subdued polychrome marble is echoed in the alternating courses of terracotta and honey-coloured stone in the piers. The warmth of these colours is somewhat overshadowed by the cooler blues of the Ottoman tiles that now indiscriminately cover the *qibla* wall. These tiles are Iznik, and their floral patterns, vases and cypress trees contrast markedly with the abstract geometrical forms of the Mamluk panelling. However, this juxtaposition of Mamluk and Ottoman decoration works more successfully in the more intimate atmosphere of the tomb which Ibrahim Agha

ABOVE: The mosque of Aqsunqur.

built for himself. Here the designers have surrounded a white marble Ottoman cenotaph with Iznik tiles set over a faithfully reproduced Mamluk dado and *mihrab*. The tilework here is used more selectively, and the Ottoman and Mamluk styles cohere with a certain charm that has been beautifully captured in Ludwig Deutsch's (1855–1930) painting, *The Prayer at the Tomb*.

BELOW: Mosque of Sultan Hasan taken from the al-Meidan. c. 1852–3.

Al-Nasir Muhammad died in 1340 at the age of fifty-eight, and he was succeeded by eight sons, two grandsons and two great-grandsons in quick succession. Most of them were mere puppets of the amirs and none wielded any effective power. As a consequence Egypt suffered forty-one years of political and economic turmoil before the Bahri dynasty finally fell. Despite this adversity the arts flowered and it was during this period that the Mamluks produced their greatest architectural masterpiece, the mosque of Sultan Hasan (1356–61). In 1347 Sultan Hasan was put on the throne at the age of twelve but his reign was soon blighted by the Black Death and famine. When he tried to assert his authority over the amirs he was



deposed and his brother al-Salih was put on the throne in 1351. Hasan was reinstated in 1354 but power remained effectively with the amirs Sarghitmish and Shaykhu. After the death of Sarghitmish, Shaykhu was removed from office and imprisoned, and Hasan made a further attempt to break the power of the amirs and other factions within the court. His actions, however, prompted a rebellion by the amir Yilbugha and he was deposed, imprisoned and murdered in 1361. Despite his brief reign and tenuous hold on power, Sultan Hasan managed to raise enough money to build Cairo's largest and most magnificent mosque.

The mosque stands beneath the Citadel and overlooks the square of Maydan Rumayla not far from Salah al-Din's hippodrome. It is an awesome building and its massive scale expresses a confidence and power that masks the weakness of its patron and the insecurity of his reign. For a sacred building it exudes a remarkable spirit of imperial grandeur in the cosmopolitan language of its forms. Its innovative design represents a coherent synthesis of architectural ideas that had previously been only tentatively stated.

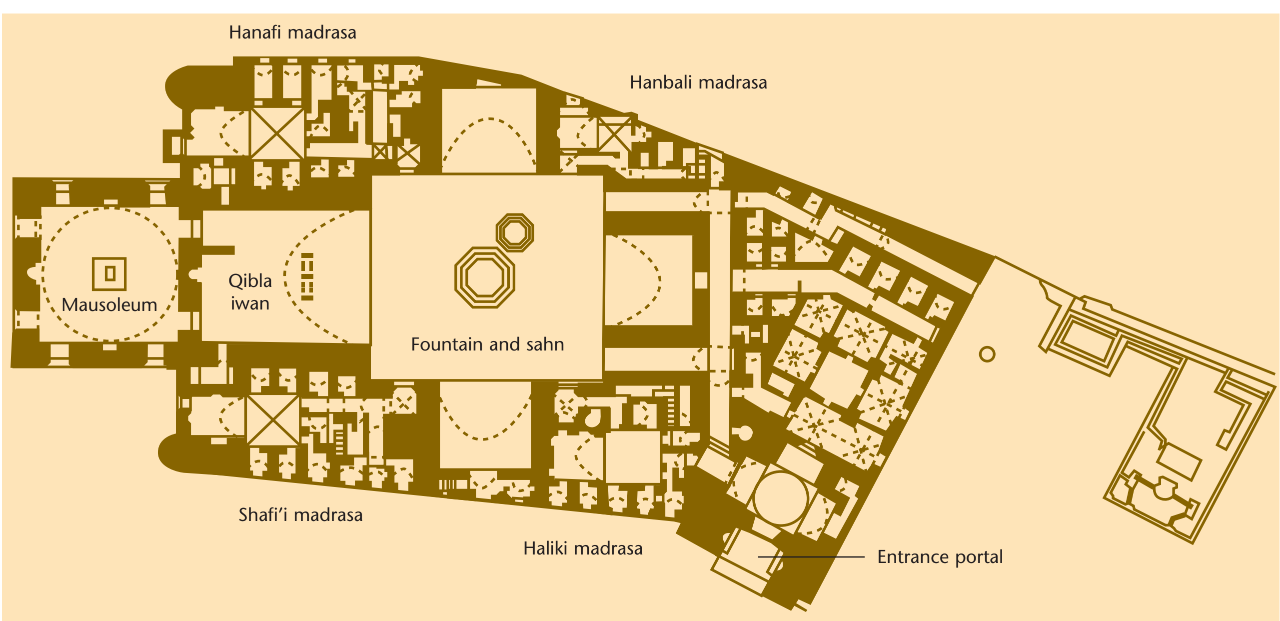
BELOW: Maydan Rumayla with the mosques of Sultan Hasan (left), Rif'ai (right) and Mahmud Pasha (foreground).



Now the cruciform plan has matured on a monumental scale with four colossal *iwan*s opening onto a deep cubic well of space. The complex principally combines the functions of mosque, *madrasa* and mausoleum, providing accommodation for four hundred students. Teaching took place in the *iwan*s, and in each corner of the *sahn* there are *madrasa*s dedicated to each of the four *madhahib*. The mosque, *madrasa* and mausoleum make up the overwhelming bulk of the building, but originally there was also a *qaysariyya* (bazaar) for the sale of valuable goods. The rents of these shops supported the institution, thus incorporating the commercial sector into the religious domain. It expresses the inclusive nature of Islam, and such practice has already been observed in the mosques of al-Aqmar and Salih Talih.

The complex has a bent plan and is built on sloping ground on the site of a former palace. The four-*iwan* plan, which has its origins in Persia, is at the heart of the building, and it is from here that its monumental grandeur is principally experienced. Unlike the cruciform buildings observed so far, there is an imposing symmetry to this interior, although the *qibla iwan*, which serves as the prayer hall, is larger than the other three. One unusual planning feature is the position of the mausoleum behind the *qibla iwan*. Normally mausolea were situated at the side of the prayer hall so that prayers were not directed towards the deceased, but here its scale and location behind the *qibla* wall is unprecedented in

BELOW: Plan of the Sultan Hasan mosque.



Egyptian architecture. It occupies almost as much space as the *qibla iwan*, and its setting appears to claim a special status and sanctity. As Hillenbrand has observed, it 'usurps the domed sanctuary in the classical Iranian mosque'.[20] All this might suggest a degree of presumption and ostentation on the part of Hasan, but it could be explained by Anatolian influence. Domed mausolea appear in similar locations in the Seljuk mosques of Anatolia and there are strong indications of Anatolian influence in this building.

From the outside, the mausoleum is a domed cube projecting from the centre of the façade overlooking Maydan Rumayla. Its cubic mass announces the solid geometrical basis of the building as a whole. The mausoleum is flanked by two minarets of unequal size rising from the corners of the mosque façade. The tallest is 84 metres high and its composition of two octagonal shafts surmounted by a pavilion with a bulbous finial follows the precedent set by the al-Maridani mosque. It is the tallest minaret in Cairo. Originally it was matched by an identical minaret on the other side of the façade, but that collapsed in 1659 and was replaced with the present two-storeyed minaret which appears truncated by comparison. When the first minaret collapsed it weakened the structure of the building and the dome fell two years later. The present dome is modern and bears little resemblance to the original, which was wooden and bulbous in form. Trial and error seems to have determined much of the building process in this ambitious work. Originally two other minarets stood over the entrance portal but these also collapsed, killing three hundred people in 1361.

The entrance portal, which is the tallest in Cairo, is 37 metres high, and it stands out from the main street façade by its angled setting. Below its projecting *muqarnas* cornice is a recessed entrance with a conical *muqarnas* hood flanked by a series of unfinished square and rectangular panels. Only two square panels with a design of geometrical strapwork are complete. However, the exquisitely cut foliate rosettes above the steps, the vertical borders of arabesque and the cable moulding on the corners provide some evidence of what the completed stonework might have been like. The composition of the portal has been compared to an earlier Seljuk monument, the Gök Medresa in Sivas, Anatolia (1271–2). Bearing in mind that the original design also included a pair of minarets in the Seljuk and Mongol style, there is no doubt that Anatolian, and to a lesser extent Ilkhanid influence, was at work here – like the already noted possible Anatolian influence in the location of the mausoleum behind the *qibla* wall. The Ilkhanid





TOP: Entrance portal to the Sultan Hasan mosque.

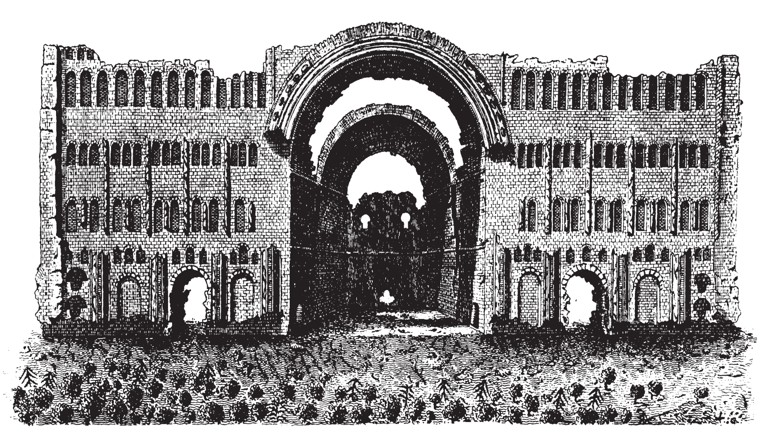
ABOVE: Gök Medresa: portal.



influence is in the detail, with Chinese lotus flowers and chrysanthemums invading the decorative borders. This transmission of Chinese motifs into Islamic art was made possible through the close bond between the two great Mongol empires – the Ilkhanid empire and the Yuan empire in China.

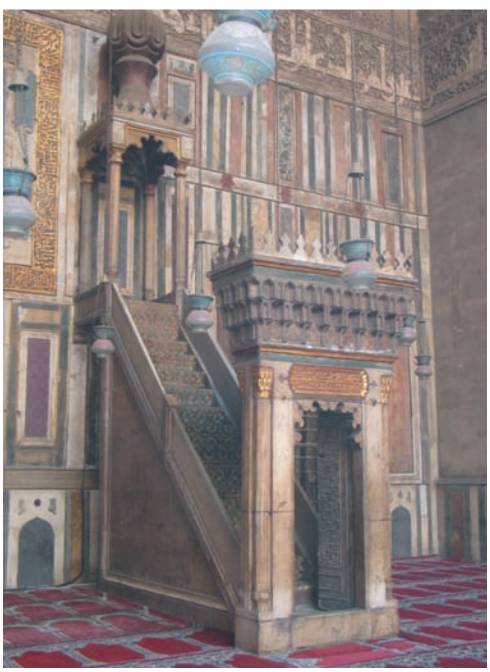
The entrance portal leads to a tall, domed, cruciform vestibule built of alternating courses of *ablaq* masonry. Its pointed lantern, 25 metres high, is decorated with geometrical patterns of *ablaq* masonry and set on *muqarnas* pendentives. The western recess is flanked by tall keel-arched niches and is roofed with a similar array of *muqarnas*. A corridor on the left of the vestibule leads to the *sahn* with a wooden-domed octagonal ablutions fountain at its centre. Four enormous *iwan*s with pointed barrel-vaults face the *sahn* and the *madrasa*s fill the angles of each corner. The *qibla iwan* is 21 metres wide, 27 metres deep and 26 metres high, exceeding in dimensions the famous Taq-i Kisra – the great *iwan* of the Sassanian palace at Ctesiphon in Iraq (late third century AD). For centuries, this great pre-Islamic monument had symbolized for Muslims the power and wealth of the Sassanian empire, and its *iwan*, the largest brick span in the ancient world, was a renowned triumph of engineering. Like the Byzantine dome of the Hagia Sophia (Church of the Holy Wisdom) in Constantinople, this structure stood as a challenge to the ingenuity of Muslim builders, and there is no doubt that the architects of Sultan Hasan's mosque were aware of meeting that challenge when they constructed the *qibla iwan*.

Except for their *ablaq* voussoirs, the three smaller *iwan*s are undecorated, but they are flanked by doors and windows elegantly composed in a vertical alignment that lightens and articulates the corners of the *sahn*. The recessed entrances to the *madrasa*s have brass



LEFT: Iraq, the *iwan* of the palace at Ctesiphon.
OPPOSITE: The fountain and *sahn* of the Sultan Hasan mosque.







ABOVE: The *qibla iwan* of the Sultan Hasan mosque.

doors set in *ablaq* masonry consisting of bold horizontal courses of grey and white marble. Fine geometrical patterns of coloured tile mosaic surround the lintels which, like the shallow relieving arches above, are constructed with joggled voussoirs in fretwork patterns. The fenestration is very sophisticated, with the first-storey windows set in the recessed panels above the doors. These mark the first of five vertically stacked iron-grilled rectangular windows of alternating sizes. These doors leading into the staircases of the *madrasa*s give no



ABOVE: Stucco Kufic inscription in the *qibla iwan* of the Sultan Hasan mosque.

hint of the extensive accommodation that lies behind. Each *madrasa* forms a discrete unit with its own *sahn*, fountain and *qibla iwan* overlooked by ranks of student rooms. Due to the irregular plan of the building the *madrasa*s are unequal in size, but the two largest, situated on either side of the *qibla iwan*, were dedicated to the Hanafi and Shafi'i *madhahib* followed by the Mamluk class and the bulk of the Egyptian population.

The *qibla iwan* is a tour de force of Mamluk design. Its decoration is concentrated on the *qibla* wall dado, consisting of polychrome panels in antique green, grey, white, buff, pink and red marble. The *mihrab* is flanked by pairs of Crusader Gothic columns with gilded capitals, supporting two pointed arches radiating with the fretwork patterns of the joggled voussoirs. Chevrons in marble marquetry fill the hood, and the rest of the niche is decorated with arcades of polychrome panels. The *mihrab* is framed at the top with a rectangular band of gilded Naskhi, and gilding is also used to pick out the arabesque detail in the borders and spandrels of the *mihrab* arcades. The composition of the white marble *minbar* is similar to that in the mosque of Aqsunqur, but here it is set against its original background, beautifully integrated in this rich polychrome ensemble. Above the dado, and running around all three walls of the *iwan*, is a magnificent band of Kufic carved in stucco. The elegant calligraphy is beautifully integrated into an arabesque background depicting Chinese lotus flowers, showing further evidence of Ilkhanid influence.

Two doors with iron grilles standing on either end of the *qibla* wall lead into the mausoleum. The interior space measures 21 metres by 30 metres, and the walls are pierced at ground level with six rectangular iron-grilled windows looking out towards the Citadel and





ABOVE: Mausoleum of Gur-i Amir, Samarqand.

Maydan Rumayla. The dado is panelled with polychrome marble, but unlike that on the *qibla* wall, some panels display lotus flowers in shallow relief. Above the dado is a continuous wooden frieze of Naskhi script running all round the mausoleum. Its bold, cursive, gilded calligraphy stands out sharply against the blue background and warmer, muted gold of the arabesque. Above this the north-western wall has a marble mosaic medallion and the other three walls are pierced with stained-glass windows and oculi. The dome, which was originally wooden, is supported on painted and gilded wooden *muqarnas* pendentives. Surrounded by a wooden screen is the modest marble cenotaph and buried beneath are the bodies of Sultan Hasan's sons, Isma'il and al-Shihab Ahmad. Sultan Hasan was never buried in his tomb and the whereabouts of his remains are unknown.

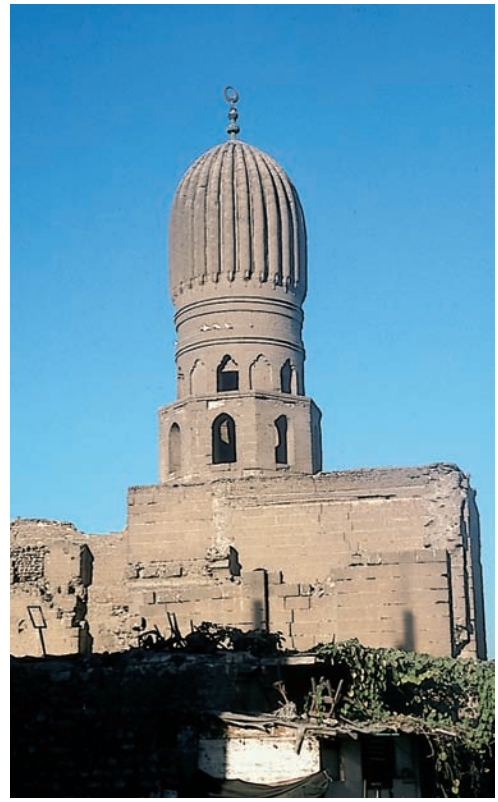
Mamluk architecture reaches maturity in the mosque of Sultan Hasan. It displays a style of architecture unique to Egypt, which although regional is paradoxically built on an assimilation of a number of elements that have their origins abroad. The four-*iwan* plan comes from Persia and the *qibla iwan* was built in the light of Sassanian architecture. Also from Persia is the domed chamber situated behind the *iwan*. The placing of mausolea behind the *qibla* wall comes from Anatolia, as does the composition of the portal with its original flanking minarets. The chinoiserie was transmitted through Ilkhanid art and there is some evidence of tilework from Tabriz. The interlacing *ablaq* patterns around the oculi on the exterior face of the mausoleum have a Syrian flavour and there is even a touch of Gothic in the Crusader columns flanking the *mihrab*. Such eclecticism could have created a mere medley of form, but here is a true synthesis which is unselfconscious and unforced. It is a synthesis which has grown and matured into a new order organically and harmoniously.

The developing international language of Cairo's architecture can be seen in a number of distinctive bulbous domes appearing at this time. The original wooden dome of Sultan Hasan was described as bulbous, and it might have looked like the contemporary dome on the mausoleum of Amir Sarghitmish (1356). This is a double dome with a very tall drum and its exterior profile swells out from a cornice of *muqarnas*. More impressive are the ribbed domes of the Sultanaya mausoleum (1360s), which also spring from *muqarnas* around the cornice of a very high drum. A third dome is that above the mausoleum of Amir Yunus al-Dawadar (1380s). It is ribbed and melon shaped, and the tall slender proportions of the cylindrical drum and octagonal zone of transition give it the appearance of a minaret. All these domes bear

a striking similarity to the Timurid domes of Central Asia, such as that which crowns Tamerlane's mausoleum, the Gur-i Mir, at Samarqand (1404). Most of these Timurid domes, however, were built much later in the early fifteenth century so they could not have influenced the Cairo builders.

A number of scholars have suggested that the origin for both the Cairo and Timurid domes might be located in early Ilkhanid architecture in Tabriz and Sultaniya in western Persia.[21] From the evidence of Sultan Oljeitu's mausoleum at Sultaniya this was a seminal period in architectural terms. Oljeitu's imposing mausoleum (the prototype of the Taj Mahal) is a masterpiece built of brick, but apart from this little else has survived in Sultaniya. The first Mongol ruler to convert to Islam, Ghazan, built a great city at Tabriz but nothing there has survived. We know that many craftsmen from Tabriz settled in Cairo and there is ample evidence of their work in al-Nasir Muhammad's *madrasa* and Citadel mosque. Faience mosaic from Tabriz has also been found in the mosque of Sultan Hasan, so it is reasonable to assume that Persian influence may account for this new style of Mamluk dome. It is most probably the case that because these Mamluk domes are built of stone, they are the earliest surviving examples of an earlier Ilkhanid style built in less permanent materials.

The strength and power of Sultan Hasan's mosque do not square with the weakness of the sultanate that made it possible. Power, wealth and patronage were in the hands of the amirs rather than the sultans, and most of the notable buildings of that era were established by amirs. In addition to the mosques and *madrasa*s of amirs Sanjar, Salar, Maridani, Aqsunqur and Sarghitmish, the architectural contribution of amirs Sunqur al-Sa'idi, Shaykhu and Yusufi, who all built impressive *madrasa*s, must also be acknowledged. The generosity of their patronage, however, was not matched by their political strength, and Egypt's manifest weakness and instability prompted a return of the Franks when the king of Cyprus, Peter of Lusignan, invaded Alexandria in 1365 with the help of the Genoese, Venetians and the Knights Hospitallers of Rhodes. After this humiliation matters came to a head, and the last of the Bahri sultans, Sultan al-Salih Hajji, was deposed in 1389 by al-Zahir Barquq. Barquq was the first of the Burji Mamluks. They belonged to the regiment of Circassian Mamluks originally founded by Qala'un, and it was this Burji dynasty that ruled Egypt until the conquest of the Ottoman Turks in 1517.



ABOVE: Mausoleum of Amir Yunus al-Dawadar.

Chapter Six

The Decorative Arts of the Ayyubids and Mamluks

Ceramics

The most obvious change in the visual arts after the overthrow of the Fatimid regime was the decline of ceramics as a major art form in Egypt. The lively art of lustre pottery, so expressive of Fatimid hedonism, declined and Syria, rather than Egypt, was cultivated as the main centre for the manufacture of decorative art during the Ayyubid period. In the case of ceramics, Raqqa and Rusafah, on the borders of Syria and Mesopotamia, became the principal centres of production until the Mongol conquests. In Egypt during the Ayyubid and Mamluk periods some lustre pottery was still produced in Fustat and surviving fragments in the Museum of Islamic Art, Cairo, show that many of the geometric, floral and animal motifs seen in Fatimid pottery continued into the Ayyubid and Mamluk periods. Some of these fragments show Persian influence, suggesting that architecture was not the only beneficiary of Tabrizi craftsmen. Also Chinese influence appears in the fourteenth century in the form of the phoenix, lotus flower and waterweeds.[1]

However, lustre pottery played a relatively minor role compared to the manufacture of underglaze painted pottery, *sgraffiato* ware and blue and white ware. Most surviving examples of Mamluk ceramics follow rather than lead the other arts and they fall into two broad categories: designs that serve as cheaper alternatives to inlaid brassware and imitations and adaptations of Chinese ceramics. Those that imitate metalware display its characteristic shapes, heraldic blazons, bold calligraphy and chinoiserie. A notable example of this can be seen in the calligraphic and heraldic

display on a bowl in the Museum of Islamic Art, Cairo. It is inscribed with the name of an officer of al-Nasir Muhammad and bears a heraldic device with incised calligraphy. Also showing heraldic devices is an incised bowl in the British Museum, London. Divided on the inside by radial segments, it displays alternately the titles and lozenge-shaped napkin blazon of the owner, signifying his rank as master of the robes. With their scratched and incised surfaces these bowls belong to a category of pottery known as *sgraffiato* ware. The *sgraffiato* technique had been employed by the Sa'd pottery in the eleventh century but during the Mamluk period it came into its own and it is this that distinguishes Egyptian from Syrian pottery at a time when both countries were producing similar designs under Mamluk patronage. Much of this *sgraffiato* pottery is thought to be the product of one workshop under the direction of Sharaf al-Abwani (possibly in Bahnasa).[2]

Another fine example of a *sgraffiato* bowl is in the Victoria and Albert Museum, London. It has a goblet shape with a flared deep-sided bowl standing on a foot. Covered in white slip, it is painted brown and white with an amber glaze. The inside decoration is mainly calligraphic with arabesque on the base and rim, and the outside consists of emblematic inscriptions with a band of scroll-work around the base. Characteristic of many *sgraffiato* vessels is the mustard coloured ground slip into which the decoration is incised. There are several examples in the Tareq Rajab Museum, Kuwait, including a pedestal bowl with a lightly incised scrolling arabesque on the outside and a petal-shaped rosette inside enclosing a six-pointed star at its centre.

The popularity of imported Chinese ceramics and the taste for chinoiserie in court circles also explain the relative decline of local potteries. Sultan al-Nasir Muhammad's peace treaty with the Ilkhanids in 1323 opened up trade routes with the Far East, and to mark the occasion, the Mongolian Khan sent Sultan al-Nasir Muhammad a gift of 700 Chinese silks. As we have already observed, the Chinese had been exporting ceramics to the Muslim world since Umayyad times but trading now increased with some intensity. There was a two-way traffic in goods, with Chinese-imported cobalt from the Middle East making possible the production of pigment for the blue and white ware that later became so popular in the Middle East and Europe. The flood of Chinese ceramics into the markets of the Middle East prompted Muslim potters to absorb, adapt and in some cases imitate Chinese styles. During the twelfth century Sung dynasty (960–1279) exports to





TOP: Goblet-shaped bowl: thirteenth to fourteenth century (Victoria & Albert Museum).
ABOVE: Ceramic bowl inscribed with the name of an officer of Sultan al-Nasir Muhammad.



ABOVE: Twelfth-century Persian frit ware bowl (Victoria & Albert Museum).

Persia had encouraged local potters to adopt more refined techniques imitating the translucency, hardness and thinness of the ivory white Ting wares and white ying ching porcelain. A good example of this in the Victoria and Albert Museum is a twelfth-century Persian frit ware bowl with a white body and incised arabesque relief.

In Egypt, Mamluk potters imitated Chinese styles in several different ways. There were vessels with no determinate design painted spontaneously with splashed overrun glazes. These were possibly a survival of an earlier tradition of Egyptian and Abbasid pottery once thought to have been inspired by Chinese Tang wares. Also widely collected and very fashionable was Yuan dynasty (1271–1368) celadon porcelain with its subtle relief decoration and pale green glazes. It was imitated by Mamluk potters, although they were limited in what they could achieve, due to the lack of kaolin clay. Most popular of all was Ming blue and white porcelain, the designs of which were freely adapted and imitated by local potters.[3]

There are some examples of Mamluk imitation of Yuan celadon ware in the Museum of Islamic Art, Cairo, and the British Museum. The Cairo museum has a pseudo-celadon green glazed vase with a wide rim and fluted body, and the British Museum occasionally displays its Mamluk pseudo-celadon bowl alongside a Chinese original. Similar to the pseudo-celadon bowl in the British Museum is a bowl in the Metropolitan Museum, New York. It has fluting on the outside and three distinctive encircling fish inside. This vessel is attributed to Persia, demonstrating that celadon imitation was not confined to Egypt.

In the Cairo Museum there are a number of examples of Mamluk copies and adaptations of Chinese blue and white designs. Most numerous are the fourteenth-century shards in the blue and white style. They are signed on the unglazed underside with the potters' names followed by their country of origin. Among others are 'Al-Ustadh al-Misri' (the Egyptian), 'Ghaybi ash-Shami' (the Syrian) and Ghazal at-Tawrizi' (the Tabrizian), suggesting an international community of potters working in Cairo at that time.[4] The blue and white style is common to all the work although there are differences in the degree of Chinese influence. Some continue loosely with indigenous Islamic designs and some mix Chinese and local design, while others are more overtly imitations of Chinese design. The works have a blue on white underglaze but in some cases there are additional colours of olive black, pale green, dark yellow and red. Some of the designs contain specific Chinese motifs, such as wave

and foam patterns or overlapping and concentric circles, but floral motifs and arabesques dominate. Often the arabesque is rendered in a looser manner – more like a floral spray – freeing it from the geometrical rigours of Islamic work and expressing the lighter, lyrical qualities of Chinese art.[5] A number of mid-fourteenth-century Mamluk pots reflect more closely contemporary metalwork in incorporating Chinese lotus blossoms into traditional Islamic designs. Two good examples of this in the British Museum are a frit ware bowl and a vase painted in black and blue with alternating patterns of calligraphy and arabesque made up of Chinese lotus blossoms.

Metalware

As with the Fatimids, in discussing the decorative arts of the Ayyubids and Mamluks we have to consider the art of an empire rather than works produced specifically in Cairo. The principal centres of manufacture were Cairo, Damascus, Aleppo and Hama, but in the case of portable works of art it is not always possible to pinpoint their exact source of production. Works are usually defined generically as Ayyubid or Mamluk and attributed to either Egypt or Syria. This is particularly the case with metalwork, which

BELOW: 'D'Arenberg Basin': 1239–49 (Freer Gallery of Art).



replaced ceramics as one of the most important art forms during the Ayyubid and Mamluk periods. Luxury items of metalwork in the Middle East have a long history and continuity of design going back to Sassanian times. By the thirteenth century the art of inlaid metalwork had reached a remarkable degree of refinement and sophistication in Persia and Mesopotamia. Mosul in particular became a renowned centre of production and there is a genre of inlaid metalwork described as 'Mosul' ware. Although these works are clearly inscribed by craftsmen from Mosul, very few can be positively identified as being made in that city. Works from Mosul were exported to the Ayyubid courts and the potential of Ayyubid patronage lured a number of distinguished craftsmen to settle in Damascus.

One very important item of 'Mosul' ware made in Syria is a brass basin, incised and inlaid with silver in the Louvre Museum, Paris (1238–40). This basin, which was probably used for washing hands during meals, was made for Sultan al-Adil II by a renowned craftsman, Ahmad ibn Umar al-Dhaki of Mosul. The inscription, with its long list of honorific titles, is typical of many court items and is worth, in this instance, quoting in full.



ABOVE: Brass basin incised and inlaid with silver (Réunion des Musées Nationaux).

> Glory to our lord, the sultan, the king, the possessing, the learned, the diligent, the fortified by God, the triumphant, the victorious, the holy warrior, the defender, the sword of the world and religion, right arm of Islam and the Muslims, subduer of infidels and polytheists, slayer of rebels, reviver of justice in the worlds, giving victory to the truth with proofs, guardian of the borders of the Muslim lands, righter of the oppressed against the oppressors, father of orphans and the poor, buttress of the caliphate, partner in the kingdom, pillar of the nation giving victory to the community, summit of dignities, pole-star of sultans, destroyer of atheists, musterer of holy warriors, dominant over the nations, sultan of the Arabs and Persians, hero of Syria, king of Iraq, unique of the age, fortified by God with victory, guardian of the borders by assailing the marauders, father of gifts, bestower of praises, al-Malik al'Adil, Abu Bakr, son of our Lord the Sultan al-Malik al-Kamil Abu al-Ma'ali Muhammad ibn Abu Bakr ibn Ayyub, may his victory be glorified.[6]

Despite the length of this inscription the decorative impact on the outside of the vessel is through the delicate bands of arabesque and the quatrefoil medallions containing figurative vignettes. Very typical of 'Mosul' ware is the background filled with interlocking geometric T-shaped fret patterns, which may have been inspired by Chinese woven silks. The quatrefoil medallions show scenes of combat, hunting and mythical beasts.

In the Freer Gallery, Washington, an Ayyubid brass basin (the D'Arenberg Basin), inlaid with silver, intermingles Christian and Muslim iconography. The basin was made in Damascus for Sultan Najm al-Din Ayyub after he was invested by the caliph in 1247. This is a most elegant and refined object divided on the outside into horizontal bands filled with fine arabesques, plaited Kufic, animals, octafoil medallions and friezes depicting battles and polo players. The medallions under the rim show scenes of the Annunciation, the raising of Lazarus, the entry into Jerusalem and the Last Supper. It has been suggested that this curious juxtaposition of Christian and Islamic iconography may have symbolized Muslim superiority over the Christians, but on the other hand it might simply have been designed for a Christian patron.[7] Whatever the interpretation the





TOP: Brass candlestick inlaid with silver: mid-thirteenth century.

ABOVE: Baptistère of St Louis: 1290–1310 (Réunion des Musées Nationaux).

imagery is ambiguous, as is another brass item in the Freer Gallery which, according to Grabar and Ettinghausen, has 'pro-Frankish leanings'.[8] This is a brass and inlaid silver canteen showing a battle scene between Christian and Muslim knights in which the Christians outnumber the Muslims. It also contains a number of scripts including an unusual calligraphic feature made up of the arms, legs and torsos of human figures. Both objects reveal the extraordinary interface between Christianity and Islam during this period.

In the Museum of Islamic Art, Cairo, there is a mid-thirteenth-century Ayyubid candlestick of beaten brass inlaid with silver. This was made either in Egypt or Syria and is inscribed as the work of Hajji Isma'il and Muhammad ibn Futtuh of Mosul. Its truncated conical base and cylindrical neck are typical of a genre of candlesticks that played a very significant part in the ceremonial life of the Ayyubid and Mamluk courts. Historians record how Sultan Khalil, in 1293, ordered a total of two hundred brass, silver and gold candlesticks for the circumcision ceremony of his brother Muhammad.[9] In another instance, al-Nasir Muhammad was presented in 1334 with as many as 3,030 candlesticks in a ceremony conducted by his amirs at the palace gates.[10] In keeping with its ceremonial pomp and circumstance, Hajji Isma'il and Muhammad ibn Futtuh's candlestick has an inscription that reads, 'Glory, long life, triumph over enemies, continuance of health, superiority, higher rank and rule'.[11] Courtly themes and signs of the zodiac embellish the rest of the candlestick, with musicians and drinking scenes around the neck and multifoil medallions around the centre of the base depicting an enthroned sultan, hunting, birds, grotesque heads and hawks attacking geese. Similar hawks and geese are repeated intermittently in smaller medallions set among the friezes of musicians, drinkers and dancers encircling the top and bottom of the base.

Perhaps the greatest masterpiece of the early Mamluk period is a brass basin in the Louvre, Paris, inlaid with gold and silver, known as the Baptistère of Saint Louis (1290–1310). It has nothing to do with the French king Louis IX, however, and the unusual absence of inscriptions prevents us from identifying the owner, although the maker's name, Muhammad ibn al-Zayn, is abundantly manifest. The Amir Salar (d. 1310) has been identified as one of the figures on the basin and it is possible that he may have commissioned the work.[12] It has a similar shape to the D'Arenberg Basin in the Freer Gallery and is divided into horizontal bands with a wider figurative frieze around the centre punctuated by four roundels. The quality of the figurative detail is unsurpassed, with extraordinary attention to costume, hair style,

physiognomy and racial differentiation. On the outside is a magnificent pageant in which east and west are clearly represented by the Mamluk amirs and their Mongol adversaries. Mounted figures in the roundels hunt bears, lions and dragons with lances and arrows. The inside friezes depict hunting scenes, and the clamour of battle is represented by six horsemen fighting with lances, bows and maces. These scenes are interspersed with roundels of enthroned figures sitting cross-legged, holding wine cups, with servants in attendance bearing swords and caskets. The base is inlaid with an animated design depicting a pond writhing with fish, eels, frogs, crabs, lizards and numerous other creatures. All of these images, inside and out, are set against a finely wrought tapestry of arabesques and animal motifs comprising leopards, dogs, gazelles, goats, hares and numerous birds.[13]



ABOVE: Brazier: second half of thirteenth century (Metropolitan Museum of Art).

Often lavish treatment was given to quite humble domestic objects such as the metal brazier in the Metropolitan Museum of Art, New York. This brass object, inlaid with silver, was made for the ruler of Yemen, al-Malik al-Muzzafar Shams ad Din Yusuf I. It functioned as a portable heater and grille and is decorated principally with Thuluth inscriptions and arabesque. Animal motifs form a distinctive part of the design, with intertwined facing dragons' heads appearing above the centre of each side, and narrow bands of animals running under the rim. Pairs of projecting lions' heads, with loops springing from their mouths, make it possible to insert rods so that the hot brazier can be carried. The dragons' and lions' heads are reminiscent of Anatolian Seljuk art, but such animal forms, as well as figurative images, sharply decline as Mamluk art moves towards a more iconoclastic form of expression.[14]

Amiral Blazons on Metal and Glass

The Ayyubid and Mamluk metalwork described so far manifests a rich figurative tradition that continues and sustains a well-established international repertoire of courtly themes. As we have seen, this was replete in the art of the Fatimids, and it was a defining characteristic of Spanish Umayyad, Abbasid, Umayyad and Sassanian art. What is significant about the Mamluk art of the latter part of the thirteenth century and beyond is the decline of the figurative element. The shape and composition of vessels, with cartouches and roundels, remain largely the same, but bold calligraphic inscriptions gradually replace figurative friezes, and heraldic devices become prominent motifs in the roundels. According to Rachel Ward this reflects the status consciousness of



ABOVE: Incense burner: 1268–79 (British Museum).

the Mamluk regime, the members of which wanted their titles and insignia of office blazoned loud and clear on their vessels.[15]

The style and rhetoric of these objects is demonstrated in a beautiful spherical incense burner in the British Museum inscribed with the name of Badr al-Din Baysari. He was an important officer serving under sultans al-Zahir Baibars and his son al-Sa'id Baraka Khan, whose names are also inscribed on the object (1268–79). The inscription on the upper hemisphere lists al-Din Baysari's honorific titles, and a double-headed eagle, most probably his personal insignia, appears in the roundels. This incense burner would have contained an iron bowl for charcoal and incense set in a series of rings, known as gimbals, which ensured stability, and the burner would have been either suspended or passed around a room by being rolled across the floor.[16]

The introduction of insignia and armorial bearings raises an interesting question concerning the extent to which they influenced the West, or vice versa. This issue was raised at the end of the nineteenth century by Stanley Lane-Poole, who suggested that Western devices such as the double-headed eagle, pelican, ibis and griffin may have their origins in the Muslim world. He cites as evidence the Eastern source of many heraldic terms, such as *gules* and *azure* which derive respectively from the Persian words *gul* and *lazurd*, meaning rose and blue. Another Eastern source of armorial bearings can be found in the Mamluk army where the divisions of the Mamluk troops were distinguished by banners and devices known in Persian and Arabic as *rank*s (colours). Lane-Poole suggests that the Western use of regimental colours may derive from this Eastern practice. In both the military and civil domains heraldic symbols of rank appear in glass, textiles and metalware as simple stylized devices. For example, the cup-bearer was signified by a cup, the sword-bearer by a sword, the taster by a table, the polo-master (*jokendar*) with polo sticks, the master of the robes by a napkin lozenge, and keys represented the office of governor.[17] If a person held several offices in the course of one career these would be represented in composite form.

Such devices appeared in Mamluk textiles and it is possible they originated there before finding a place in more permanent materials such as metal and glass. Rare surviving examples can be seen in the Textiles Museum, Washington, the Cleveland Museum and the Ashmolean Museum, Oxford. The Washington fragment is a woollen head-trapping for a horse showing a composite design of a cup between two lozenge-shaped napkins. The Cleveland fragment shows the closed crescent motif enclosed in pearl roundels. Chinoiserie also features in this fragment in the form of lotus flowers.

The blazon on the Oxford fragment shows a cup and lozenge set within a shield and it is possible that it dates from the late fourteenth century and belonged to Amir Kumishbugha al-Mamawi of Syria.[18] A similar napkin blazon appears in an Egyptian glass beaker, found at Qus, now in the British Museum. Numerous examples of such devices appear in Syrian and Egyptian glass mosque lamps. These gilded and enamelled lamps assumed a standard vase shape in the fourteenth century, consisting of foot, bulbous body, flared neck and looped handles. A fine example can be seen in the lamp of Amir Shaykhu in the Museum of Islamic Art, Cairo. The body of this lamp displays a bold inscription on a blue background, and the neck has a blue enamel inscription on a gilded background with a circular medallion containing a red cup between two bars. A similar lamp made for Amir Tuquztimur, cup-bearer to al-Nasir Muhammad, dated 1340, is in the British Museum. On the neck of this vessel is a shield containing a golden eagle and cup on a red background, and the inscription, taken from the 'Light sura' in the Qur'an, is blue against an arabesque of



ABOVE: Mosque lamp of Tuquztimur: 1340.

BELOW: Mosque lamp of gilded and enamelled glass: fourteenth century (Museum of Islamic Art, Cairo).



white and red. The two horizontal bands which frame this inscription are decorated with flying birds – a good example of the chinoiserie that was beginning to penetrate Mamluk art at this time.

Tuquztimur's blazon also appears on a metal basin (c. 1344) and vase (before 1345) in the Museum of Islamic Art, Cairo. The latter of these beautifully inlaid brass vessels displays chinoiserie in the form of delicate silver arabesques with lotus flowers, peonies and flying ducks. The insignia of the cup-bearer in a circular shield also appears on a brass inlaid candlestick belonging to Sultan Kitbugha in the Walters Art Gallery, Baltimore (1290–3). It was the office that Kitbugha had long held at court, and he proudly continued to use this device on his coinage, and objects like this, long after he became sultan. Other examples of the device can be seen on two brass inlaid vessels in the Museum of Islamic Art, Cairo, which belonged to the Amir Toqto, an officer in the court of Sultan al-Ashraf. They are a basin and ewer bearing the cup-bearer's blazon between two bars. The brass basin is a particularly fine specimen in which the bold Thuluth inscription, inlaid with silver, forms the dominant motif.

Chinoiserie

Following al-Nasir Muhammad's peace treaty with the Ilkhanids, Chinese motifs became a significant feature in many of the decorative arts during the first half of the fourteenth century. They were transmitted from China through the Ilkhanid dynasty and links with Egypt were strengthened by the Mongol background of many Mamluks, such as the sultan Kitbugha (1295–7). This can clearly be seen in the lotus flowers in an exquisite brass basin, inlaid with gold and silver, belonging to al-Nasir Muhammad in the British Museum (1330–41). The roundels of lotus flowers contain inscriptions at the centre proclaiming 'Glory to our Lord the Sultan', and al-Nasir Muhammad's titles are writ large in the bold calligraphy that fills the remaining cartouches. In the collection of the Galleria Estense, Modena, another bowl belonging to one of al-Nasir Muhammad's amirs shows similar lotus flowers and Thuluth script. It also depicts a number of mythological creatures and, like the Baptistère of Saint Louis, the base inside is covered with fishes. Fish motifs on the base are featured in a number of water basins, and one with a similar design, with fish swimming around a central whorl, is engraved on the base of a brass bowl in the

BELOW: Brass basin inlaid with silver and gold (British Museum).



British Museum. This lively aquatic scene is complemented in the roundels on the outside with an aerobatic display of ducks spinning topsy-turvy around another whorl. The introduction of these whorl motifs now replaced the fret pattern that had previously occupied the smaller roundels in earlier Ayyubid and Mamluk metalware.

Chinese motifs also appear on Mamluk textiles, and one of the finest surviving examples is a silk mantle, once used in Spain to cover a statue of the Virgin, now in the Cleveland Museum of Art. It is woven in gold and white on a blue background and the layout of the design is an ogee trellis – a significant format, possibly influenced by Yuan silks, which subsequently became a major feature of Ottoman textiles. Within a rich floriate arabesque, the main motifs are peonies, teardrop-shaped lotus blossoms and smaller octafoil rosettes containing the Arabic inscription *al-ashraf*. Some scholars have interpreted *al-ashraf* as one of the titles of Qa'it Bay (1468–96), but an earlier date is more likely because this inscription has been identified in a painting by the Master of Bambino Vispo, entitled *Enthroned Madonna with Saints* (c. 1430). Paintings provide good evidence of the popularity of oriental textiles in Europe, and Mamluk

BELOW: Mosque lamp from the Sultan Hasan mosque: early fourteenth century.

BOTTOM: Silk mantle once used to cover a statue of the Virgin: early fourteenth century (Cleveland Museum of Art).









TOP: Mosque lamp: c. 1350–60.

ABOVE: Mamluk glass bottle: fourteenth century (Metropolitan Museum of Art).

silks were much coveted in the West, where, like Islamic glass, they entered the ecclesiastical domain. Two examples of Mamluk silks used as vestments are in the Victoria and Albert Museum, London. One has a lotus design similar to that on the Cleveland mantle, and the other is a complete chasuble consisting of an ogee trellis containing circular and almond-shaped medallions.

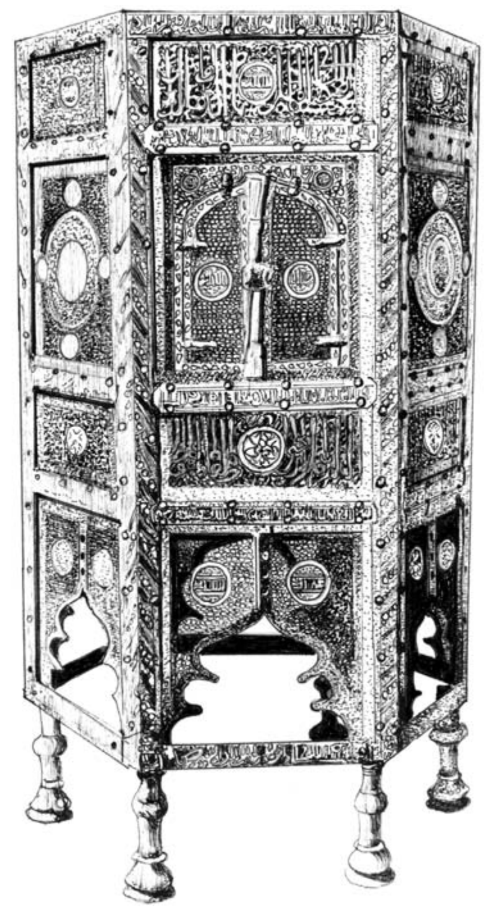
Chinoiserie also enters fourteenth-century glassware and is richly manifest in two mosque lamps from the collection of the Sultan Hasan mosque in the Museum of Islamic Art, Cairo. These objects display no calligraphy and the designs consist entirely of dense and delicate arrangements of Chinese lotuses and peonies. In the British Museum, a similar lamp covered with peonies and lotuses also displays the blazon of the swordbearer. With the exception of mosque lamps, glass was generally regarded as a cheaper substitute for metalware, and for this reason honorific inscriptions are not usually included in glass design. In one example, a beautifully gilded and enamelled basin in the Gemeentemuseum, The Hague, lotus flowers replace blazons in the roundels. This vessel imitates the shape and decoration of contemporary brassware, but its colour and transparency transforms the format with sparkling life and energy. It does not look or feel like a cheaper substitute for inlaid brass.

Other examples of chinoiserie can be seen in the *feng-haung*, or phoenix, seen on an early fourteenth-century Syrian vase in the Calouste Gulbenkian Foundation, Lisbon, and two flasks (Egyptian or Syrian), one in the Metropolitan Museum of Art, New York, and the other in the Museum of Islamic Art, Cairo. The Gulbenkian vase is red, blue, green, white, yellow and gold and shows a number of birds flying over a stream. The treatment is naturalistic with sharply observed details, such as a falcon attacking a goose, but in the midst of all this naturalism a mythical note is struck by the splendid hovering phoenix in all its exotic plumage. The two flasks, similar in shape, have tall cylindrical necks around which the phoenixes trail their long tails. The Metropolitan flask is hybrid in design with Chinese motifs in blue and gold arabesque on the shoulders, and Persian influence in the frieze of mounted warriors around the girth.[19] It is likely that this vessel was made for export to China where the making of glass was much less developed than ceramics. Also possibly destined for export, but in this case to Europe, is the magnificent Ayyubid gilded and enamelled glass pilgrim flask in the British Museum. It has figurative motifs consisting of seated figures and horsemen with arabesques on the front and back. It is shaped like a leather saddle flask with one flat side. The

medallions and arabesques echo similar designs found in contemporary carpets and manuscript illuminations and the saddle flask format represents another intriguing example of the transmutability of Islamic design. A similar bottle, containing earth from Bethlehem, was donated in 1365 to St Stephen's Church in Vienna by Duke Rudolph IV of Austria. It is possible that the British Museum pilgrim flask also originally contained relics from the Holy Land.

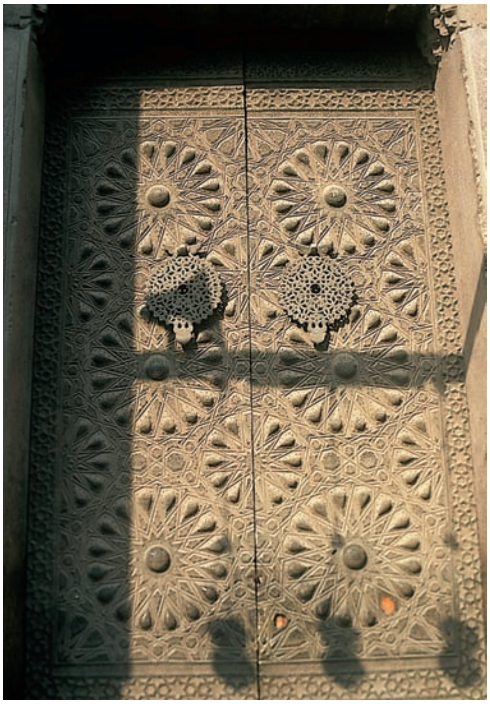
Mosque Furniture and Doors

With the exception of mosque lamps, most of the objects considered so far belong to the secular world, expressing something of the taste, opulence and magnificence of the court. Among notable examples of mosque furniture are chests and free-standing metal cupboards, known respectively as *sunduq*s and *kursi*s, used for storing copies of the Qur'an. The term *kursi* is also used to describe a table or a lectern with a V-shaped top designed to support the Qur'an. One of the finest metal *kursi*s of the free-standing variety, made for Sultan Qala'un in 1327, is in the Museum of Islamic Art, Cairo. It is a tall, flat-topped hexagonal cupboard, standing on legs, with an extremely rich and intricate design in filigree brass, inlaid with silver and engraved. The early Mamluk *sunduq*s took the form of wooden chests standing on short legs and covered with sheet brass, inlaid with silver and gold. They have hinged lids, metal clasps and bold Qur'anic inscriptions, and they were designed to store multiple volumes of the Qur'an. One such *sunduq*, made to contain thirty volumes of the Qur'an, is in the library of the al-Azhar mosque. It dates from the time of al-Nasir Muhammad and displays Thuluth inscriptions on the body and Kufic on the lid, enmeshed in a dense ground of arabesque. A similar design is manifest in another *sunduq* in the Berlin-Dahlem Museum made by Muhammad ibn Sunque and inlaid by Hajj Yusuf al-Ghawabi. The design format is similar to the al-Azhar *sunduq*, but the Thuluth inscriptions, which include an extract from the 'Light sura', stand out more boldly.



TOP: Inlaid metal *kursi* made for Sultan Qala'un: 1327.

During the Mamluk period some of the most striking examples of metalwork can be found in the inlaid bronze door facings in many mosques and *madrasa*s. Since the middle of the thirteenth century these became increasingly necessary because of the poor quality of available wood. Doors were made of wooden planks fixed to a frame and bonded with bronze bands. Thin sheets of bronze were nailed to the surface, cut into various geometric or medallion shapes, and the surfaces perforated,





TOP: Doors of the Sultan Hasan mosque.

ABOVE: Detail of door of the Sultan Hasan mosque.

inlaid, chased or embossed by means of casting or repoussé work. Chasing involved punching and indenting the surface without removing the metal, and repoussé was a technique for embossing forms by hammering thin sheets of metal against a firm but yielding substance (usually, in the case of vessels, from the inside out).[20] Repoussé work was often pierced into filigree patterns, and this technique can be seen in the bosses and lobes that appear in the radiating patterns in the entrance doors to Sultan Hasan's mosque (now installed in the mosque of Sultan al-Mu'ayyad Shaykh). The quality of metalwork in these and other doors throughout this mosque, particularly those in the *minbar*, is unsurpassed.

Similar repoussé work can be seen in the bronze entrance doors to the *madrasa-khanqah* of Sultan Barquq (1384–6) in al-Mu'izz street. Here the surface is made up of radiating patterns of twelve- and six-sided figures which spring into relief in the repoussé bosses, hexagons and lobes. Unlike at the Sultan Hasan mosque, these surfaces are not pierced but engraved and inlaid with silver and composed of a varied range of flat and convex lobes and regular and irregular hexagons, engraved and inlaid with fine arabesques, lotus flowers and rosettes. Throughout the latter half of the fourteenth century bronze became more scarce and sycamore more readily available. For this reason the *madrasa* doors in the inner *sahn* contain less bronze and the doors to the mausoleum are made entirely of wood. The wooden planks of the *madrasa* doors are clearly visible, providing the ground for the copper facing of open-work arabesques in the central medallions, cornerpieces and borders. More reminiscent of carpet patterns and contemporary bookbinding, these finely engraved filigree arabesques have a lightness of touch in keeping with the fleur-de-lis patterns in the joggled voussoirs of the door lintel above.[21]

Perhaps more remarkable than the technical skills involved in these door facings is their complexity of geometric design. The entrance doors of the Sultan Hasan mosque display a typical Mamluk pattern in which sixteen- and twelve-sided figures are locked together into one dynamic surface by the intermediary of overlapping subsidiary polygons. In his book *Islamic Patterns*, Keith Critchlow examines a similar design, and the following analysis is worth quoting because it is pertinent not only to this particular example (of a *minbar*), but to Mamluk geometric design as whole:

> Twelve- and sixteen-sided polygons are integrated by means of a curious pair of overlapping heptagons and a strange form of irregular inverted hexagons inserted between them; this is another magnificently ingenious feat – arriving at a mathematically 'impossible' result in pattern making, and giving rise to a beautiful motif which appears on the side of one of the mosque *minbar*s in Cairo. We have here a design which explores one of the most difficult of all sets of relationships to resolve in terms of design, that is the challenge presented by two seven-sided polygons as the basis of an indefinitely repeated pattern. After the solution has been demonstrated, the sense of its rightness and inevitability makes it difficult for us to realise the nature of the geometrical feat, itself a victory of integration and unification.[22]

Like a number of scholars, including Titus Burckhardt, Frithjof Schoun and Martin Lings, Keith Critchlow's studies of Islamic geometrical design emphasize its transcendental and metaphysical nature. They explain its cosmological meanings and how it stands as a visual metaphor for the central Islamic doctrine of unity. The patterns in the doors of the Sultan Hasan mosque convey this notion of unity in the reconciliation and integration of their 'impossible' mathematics. It is also expressed in the underlying network of boundless geometrical forms that are harmonically framed and contained within a border they manifestly overstep. As Martin Lings has revealed in his examination of contemporary manuscript illumination, such patterns express a balance between containment and infinitude. He compares the radiating designs found in Mamluk illumination to the spider's web made up of radii and concentric circles. The radii express continuity and infinitude, and concentric circles discontinuity and circumscription. In metaphysical terms they disclose concepts of nearness and farness – God's immanent, indwelling nature and His transcendental remoteness. Lings invokes similar concepts of continuity and discontinuity through Schoun's terminology of 'radiation' and 'reverberation'. He shows how these patterns radiate and reverberate ad infinitum without violating the harmony of the regulating symmetry. Unity is achieved through the resolution of infinitude with the containing spirit of wholeness and perfection.[23] In its momentum towards infinity, Islamic geometry is essentially sublime, unlike Greek classicism which expresses beauty and perfection in the repose of the finite.



ABOVE: Madrasa door in the *sahn* of the madrasa-khanqah of Sultan Barquq.

Woodwork

Such metaphysical interpretations of Islamic design are of enormous significance for they illuminate our understanding of Islamic art at the profoundest level. However, we should not lose hold of the pragmatic and functional factors that also determine its form. In the case of woodwork, for instance, scarcity of wood and the climate of Egypt were critical factors in the design process. Imported wood from Anatolia and Europe was expensive and treated as a precious commodity. During the Crusader period European supplies dried up due to a Papal ban on exports to the Middle East, although Venice got round the embargo by shipping wood in very small 'matchwood' pieces.[24] The extreme temperatures of Egypt's climate caused the expansion, shrinkage and warping of wood, and it was therefore necessary to construct artifacts out of small wooden panels allowing for flexibility and movement within the structural norm. Another characteristic feature of Cairene woodwork, seen mainly in domestic houses, is the *mashrabiyya* lattice-work constructed from short lengths of turned wooden bobbins. Both of these methods of woodworking lent themselves to complex forms of geometric elaboration.

As already observed, the rigorous use of geometry in woodwork came into its own during the Ayyubid period. It can be seen in the panels of a cenotaph from the mausoleum of Imam Shafi'i (1211), now installed in the Museum of Islamic Art, Cairo. It displays a tightly organized pattern of grooved strapwork within a border of Naskhi inscriptions, which extends from a central star and divides the panel into regular and irregular polygons carved with arabesque. Although the strapwork emanates from the star, the design stabilizes and comes to rest within the broad horizontals and verticals of a cruciform, rectilinear framework. Of the distinctive radiating patterns characteristic of later Mamluk design, the earliest example found in Ayyubid woodwork is a pair of wooden doors (1219) made for the Citadel at Aleppo. These consist of eleven-sided polygons locked together by a subsidiary network of twelve- and ten-sided stars. Ernst Herzfeld regarded this design as one of the most complex yet achieved, and like Critchlow he sees this mathematical configuration as a resolution of an 'almost unsolvable problem'.[25]



ABOVE: Panel from the mausoleum of Imam Shafi'i.

In later Mamluk woodwork such radiating patterns find their most virtuoso expression in the *minbar*s of the Qa'it Bay period

(1468–96). Here the inlaid luxury of metalwork finds its correspondence with inlays of ivory, bone, ebony, cedar and redwoods. Two of the finest *minbar*s of the period belong to Sultan Qa'it Bay. One is in his funerary complex in the Eastern Cemetery and the other is in the Victoria and Albert Museum. The form of the these *minbar*s assumed a broadly uniform design: triangular in shape, with canopies adorned with projecting tiers of *muqarnas* crowned with bulbous finials like those on contemporary minarets. The origin of the Victoria and Albert *minbar* is uncertain. Creswell attributed it to Qa'it Bay's *madrasa* at Qalat al-Kabsh, which has a modern wooden *minbar*. The Victoria and Albert *minbar* (c. 1470) is remarkable for its richness of design and colour, with its dark wooden inlay picked out with finely carved ivory arabesques. Its sides are made up of patterns of grooved strapwork radiating from sixteen-pointed stars with small ivory panels filling the various polygonal interstices. Of the same period is a well-preserved *minbar* in the mosque of Amir Qijmas al-Ishaqi (1494–5), one of Qa'it Bay's amirs. The design here is very similar to that of the Victoria and Albert *minbar*, but the bosses at the centre of the radial patterns give the surface more relief, and bone is used as a substitute for ivory.

A third notable *minbar* of Qa'it Bay is in the *khanqah* of Sultan Faraj ibn Barquq in the Eastern Cemetery. Unlike the others, this is made of stone and expresses the virtuosity of stone carving that reached its peak during the Qa'it Bay era. It is an elegant structure leaning against the *qibla* wall with remarkable patterns radiating from sixteen-sided rosettes on the triangular side panels. Reverberating from the centre of these rosettes is an immensely complex network of lines that terminate at the edge, forming half rosettes. A fine arabesque is carved between these lines but it is the geometrical forms that dominate the field. The balustrade panels are decorated with alternating stellar patterns and arabesques, and the square side panels under the seat of the *minbar* are carved with Naskhi script. There is an open space, normally filled by rectangular panels, under the seat between the triangular side sections and the *qibla* wall. This adds lightness to the structure and contributes to its leaning aspect. Four columns carved with chevrons carry three elegant arches, each shaped like a fleur-de-lis, and supporting a canopy crowned with a beautifully carved bulbous finial.

The geometric ingenuity of Cairene design is also demonstrated in the *mashrabiyya* lattice-work that characterizes so much of Egypt's domestic architecture. In the mosque its use was limited, but this form of turned woodwork was employed in the screens of the Salih



ABOVE: *Minbar* of Sultan Qa'it Bay, in the Victoria and Albert Museum.





TOP: Stone *minbar* in the *khanqah* of Sultan Faraj ibn Barquq.

ABOVE: *Mashrabiyya* windows in a house in al-Mu'izz street.

Talih mosque, the Qala'un complex and the Maridani mosque. Here lattice-work is used to enclose the tomb of Qala'un and screen off the *qibla riwaq* and entrance portico to the Maridani and Salih Talih mosques. In all these examples the woodwork is heavy and cumbersome compared to the light *mashrabiyya* work that characterizes the window lattices of later domestic architecture. *Mashrabiyya* work consists of a multiplicity of turned bobbins, usually oval in shape, connected by short pegs or turned links. The combinations of these links are countless, forming cross or stellar patterns, often from polygonal centres. As Lane-Poole observed, 'The Cairo workmen found an infinity of changes that could be rung on their simple materials.'[26] The work could be extremely intricate, with as many as 2,000 bobbins to a square metre, and where it is used on the balustrades of *minbar*s it is frequently inlaid with ebony and ivory.

Mashrabiyya work is most commonly seen in the windows of domestic houses projecting like oriels above street level. They are designed in such a way that the occupants, particularly women, can experience the free circulation of air while protected from the glare of the sun, and enjoy in privacy a clear view of the street or courtyard below. Larger lattices often contained smaller hinged windows, and frequently the designs of the upper windows were elaborated with simple forms of representation and inscriptions. Within the structure of a major pattern a finer image could be interwoven representing various objects or symbols such as lamps, ewers, lions or Coptic crosses or simple inscriptions with words like 'Allah' or 'Allah is my hope'.[27] One of the earliest surviving examples, dating from the mid-fourteenth century, is in the Museum of Islamic Art, Cairo. It is made up of squares and beaded diagonals and shows the silhouette of a *minbar* and suspended mosque lamp. It came from the Sultan Hasan mosque but whether it was designed for that building is uncertain (the mosque was used for a time as a storage depot for woodwork).[28] The word *mashrabiyya* means 'a place for drinking' and it originated from the practice of placing near the window porous earthenware vessels that cooled water by means of evaporation.

Calligraphy and Illumination

Mamluk art displays a remarkable continuum in which the language of geometry, calligraphy and arabesque is eloquently spoken by all the arts. For example, the radiating patterns of Mamluk wood and metalwork find their place in the Qur'anic art of illumination with

dazzling results. Combining gold leaf with colour, many of these patterns achieve a resonance that vibrates throughout the pages of the manuscripts with myriad shifting and pulsating optical ambiguities. Geometrical shapes homogenize the surface, but the regulating framework is in a constant state of restlessness. This is due to the inherent dynamics of the shapes as well as the animating tension created by the integration of organic and crystalline forms. The balance between geometrical form and arabesque is echoed in calligraphy where angular Kufic is offset by the flourishes of Muhaqaq, Thuluth, Naskhi and Rayhani scripts. It is essentially a visionary art in which the eye is drawn into complex networks of pattern expressing an infinitude that induces meditation, unfocuses the mind and renders it susceptible to transcendental thought.

Next to architecture, it is calligraphy that holds the highest rank in Islamic art. As the fourteenth-century encyclopaedist, Muhammad ibn Mahmud al-Amuli, wrote in a work entitled *Nafa'is al-Funun*:

> The art of writing is an honourable one and a soul-nourishing accomplishment; as a manual attainment it is always elegant, and enjoys general approval; it is respected in every land; it rises to eminence and wins the confidence of every class; being always held in high rank and dignity … The Prophet (peace be upon him!) said: 'Beauty of handwriting is incumbent upon you, for it is one of the keys to daily bread.' A wise man said: 'Writing is a spiritual geometry wrought by a material instrument.'[29]

This 'spiritual geometry' extends to the art of illumination, which accentuates and embellishes the script, prompting the reader to pause and reflect. According to Martin Lings the principal motifs of Qur'anic illumination are arboreal and solar, because the Qur'an likens the *good word* to a tree, and describes its revelation as radiant.[30] Sunbursts appear in the margins and mark chapter divisions, and arboreal motifs appear in various permutations as the 'tree of life' in palmettes or are integrated into the general scheme of arabesque. The notion of radiance is expressed most strongly in frontispieces where whole pages of illumination provide a majestic fanfare to the following text.

Calligraphy and illumination reached their peak in Mamluk art during the fourteenth century when a number of Qur'ans were



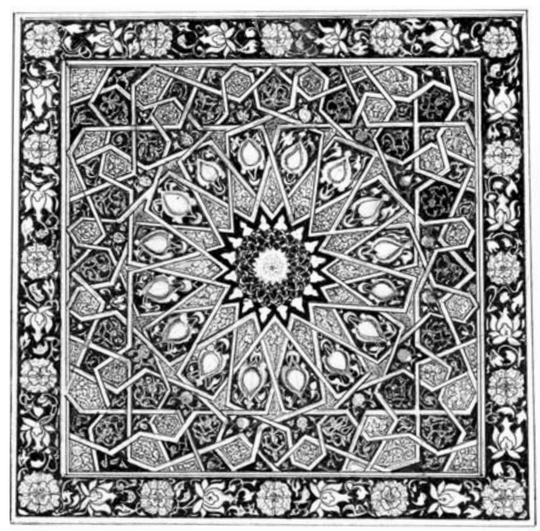
ABOVE: Frontispiece of a Qur'an written by Muhammad ibn al-Wahid and illuminated by Muhammad ibn Mubadir and Aydughdi ibn Abd Allah al-Badri: 1304 (British Library).

commissioned in editions of up to thirty volumes. Perhaps the greatest masterpiece of the Mamluk era is the seven-volumed Qur'an in the British Museum commissioned by Baibars al-Jashankir for his *khanqah*. It was commissioned before he became sultan when he was high chamberlain, and was copied by Muhammad ibn al-Wahid and illuminated by Muhammad ibn Mubadir and Aydughdi ibn Abd Alah al-Badri in 1304. The double-page frontispiece to the first volume consists of a gold, white and blue design based on a ground plan of interlacing circles. Enmeshed within this structure is a framework of rectangular and stellar panels containing inscriptions on a delicate background tracery of arabesque. Two forms of calligraphy are used: the cursive Thuluth in the central panels and Eastern Kufic in the upper and lower panels. The white Thuluth inscriptions state 'The first' and 'The seventh' respectively, and the text for the Kufic inscriptions comes from sura

56, 'The Event'. The main panels are surrounded on three sides by a broad border of gold open-work arabesque terminating with finials made up of alternating lotus flowers and buds. These light, elegant pages faultlessly demonstrate a harmonic resolution of opposites made up of open, closed, angular, cursive, static and dynamic patterns, picked out in blue and gold, 'the colours of the heavenly vault and its luminaries'.[31]

During the fourteenth century many illuminated Mamluk manuscripts displayed stellar patterns with Chinese lotus flowers and peonies. One such example is the double-page frontispiece in a Qur'an written and illuminated for Arghun Shah al-Ashrafi (1368–88) in the National Library, Cairo. At the centre of each page is a small radiating sixteen-sided star which bursts into flower and extends into a larger sixteen-sided figure enclosing floral motifs. The central square panel is framed with a band of alternating lotus flowers and peonies and these motifs are repeated and elaborated in the outer frame, border and margin palmette. The text in the upper and lower panels is taken from sura 26, 'The Poets', and is written in ornamental Eastern Kufic. Kufic has a hieratic status in Mamluk manuscripts, and was invariably used in headings in the upper and lower panels, where its passive monumental aspect acts as a perfect foil to the cursive scripts used in the centre panels.

Among the most beautiful manuscripts of this period are those commissioned by Sultan Sha'ban. Two works commissioned for his mother's *madrasa* and his own *khanqah* near the Citadel, in the National Library, Cairo, display remarkable illuminated frontispieces. Both manuscripts reveal how profundity can be expressed in purely ornamental language, and they convincingly challenge modernist Western attitudes that dismiss ornamentation as superfluous and decorative. These manuscripts resonate with a beauty and majesty that cannot be explained by formal analysis alone. There is a heraldic magnificence in the gilding and colour, and the designs are perfect in their resolution, but there is another, deeper dimension which is implicit in their creation. It is manifest in the faultless technique, care, patience and breathtaking complexity of the task in hand. The visual texture, consisting of almost imperceptible surface irregularities and slightly embossed layers of gold leaf, constantly reminds us that these works are the product of the human hand and therefore are not perfect. They are essentially a labour of love, an act of dedication and religious devotion, and 'a soul-nourishing accomplishment'. Modern computers can replicate the complexity of such patterns in an



ABOVE: Detail of a panel featuring Chinese lotuses and peonies: fourteenth-century illuminated frontispiece.

instant, but the lifeless hand of mechanical reproduction can never achieve the surface richness and integrity of these works.

The frontispiece to the Qur'an commissioned for Sultan Sha'ban's mother's *madrasa* in 1369 consists of a central panel filled with large octafoil rosettes and smaller quatrefoils. The cusped interstices between these figures form a luminous golden background decorated with lotus flowers. The background colour of the octafoils is ultramarine and they are filled with gold openwork arabesques with pink, scarlet, green and blue petals and buds radiating from a centre made up of either peonies or lotus flowers. The central panels are framed in gold, and above and below are ornamental Eastern Kufic inscriptions set in ultramarine cartouches against gold and turquoise arabesques. Richly coloured arabesques are sustained in the borders, which have an ultramarine background, gold openwork and cusped floral motifs that echo more expansively the solid gold shapes forming the background of the central panel. There is a courtly sumptuousness to these pages, which by means of the rosette and floral arabesque emblematically express God's plenitude and visions of paradise.

The double-page frontispiece to the Qur'an commissioned for Sultan Sha'ban's *khanqah* is more dense in its design and has no calligraphy. It was written in 1371 by Ali ibn Muhammad al-Mukattib al-Ashrafi and was illuminated by Ibrahim al-Amidi. The broad arabesque borders frame central panels dominated not by the rounded lobes and cusps of floral motifs, but by unrelenting angular geometrical forms. Five luminous gold decagons are poised in the centre of each panel, and eight other decagons are cut into halves and quarters as they disappear behind the frame. A pentagon forms the nucleus of each decagon and from this centre extends an angular grid of strapwork across the whole surface. From its pentagonal centre the strapwork forms a ten-sided star and then extends beyond the decagon to link with its neighbours through a series of octagons, overlapping hexagons and other polygonal by-products. The stability of the surface is disrupted by this expansive network of restless, turning, geometric elements. It is like looking into the mechanism of an antique gold watch with its cogs, cranks, precious stones and engraved surfaces. Against an ultramarine background, there is a jewel-like intensity in the way the tiny irregular polygonal panels are filled with dainty floral motifs and open-work arabesques picked out in gold and white. The angularity and golden density of the central panels are complemented in the borders where ultramarine dominates, and the

open-work arabesque consists of delicate cusps and petals rendered in light, wiry gold leaf. In both this and Sultan Sha'ban's mother's *madrasa* manuscript, the slightly embossed surface of gold leaf catches the light like a mosaic, creating a scintillating surface in keeping with the shifting dynamics of the underlying patterns.

Secular Manuscripts

Secular manuscripts in Egypt do not match the magnificence of Qur'anic calligraphy and illumination, and the Arab world in general failed to achieve the dizzy heights and sophistication of Persian miniature painting. The first poet writing in the Persian language was Firdawsi, whose epic poem the *Shah-nama* ('Book of Kings'), completed in 1020, describing ancient battles between Turks and Persians, inspired generations of miniature painters. This, and the work of other poets, such as Nizami, Attar, Jami, Hafiz and Sa'di, stimulated a highly refined, lyrical style of miniature painting in keeping with their finely wrought poetry. The great oral traditions of Arab poetry was not expressed in an illustrated form comparable to the Persians. Most of the earliest surviving Arab books date from the beginning of the thirteenth century, and in Egypt the categories of illustrated books were mainly limited to scientific works on astronomy, botany, medicine and mechanics and bestiaries. Some literary works, however, such as *Kalila and Dimna* and the *Maqamat* ('Assemblies') by al-Hariri of Basra (1054–1122), also became immensely popular.

Kalila and Dimna was a collection of animal fables from India by Bridpai, and al-Hariri's *Maqamat* consisted of stories about 'an importunate old beggar, full of eloquence' called Abu Zayd.[32] The *Maqamat*, written in rhyming prose, has been admired not just for its literary qualities, but for its wit, erudition and vivid portrayal of everyday city life. Those who enjoyed a courtly life in medieval Islam – enthroned potentates, hunters, dancers, drinkers and musicians – continued to find their place in Arab art in the frontispieces of such manuscripts as the *Kitab al-Aghani* (The Book of Songs) by Abu al-Faraj al-Isfahani (897–967). This book consisted of a collection of songs from the court of the Abbasid Caliph Harun al-Rashid. It also contained biographies of the poets and musicians, and reveals a wealth of information about Arab culture from pre-Islamic to Abbasid times. It was copied many times, but the most famous manuscript was made for Badr al-Din Lu'Lu, governor of Mosul, in 1219. Seven of its original twenty

volumes survive distributed around three libraries – the National Library, Cairo, the Millet Kütüphanesi, Istanbul, and the Royal Library, Copenhagen. The frontispieces to these volumes display courtly themes rather than illustrating the text.

Among the scientific works, the *De Materia Medica* (*On Medical Matters*) by Dioscorides was the most important. Dioscorides (c. AD 40–90) was a Roman who served in Nero's army and wrote his famous treatise listing the medicinal properties of six hundred plants. His work was translated from Greek into Arabic in the ninth century, and its Graeco-Roman origins can clearly be seen lingering in the Byzantine style of the famous Topkapı manuscript produced in either northern Syria or Iraq in 1229. The extraordinary accuracy of botanical observation displayed in this manuscript emphatically demonstrates that Western painters did not have the monopoly on artistic naturalism. Of the scientific works attributed to Egypt, one of the earliest is al-Jaziri's *Kitab fi Ma'rifat al-Hiyal al-Handasiya* (*Book of Knowledge of Mechanical Devices*), a book on automata originally commissioned in 1206 by the Artukid governor of Diyabakır, Nasir al-Din Mahmud (1200–22).

Treatises on mechanics such as al-Jaziri's work have their origin in Greek science and derive principally from the works of Hero of Alexandria and Philo of Byzantium. In his *Pneumatica* (c. 60 AD), Hero of Alexandria disseminated the experimental science of Strato, and on his own account contributed significantly to the field of pneumatics and the construction of automata and artillery. Philo of Byzantium wrote a comprehensive treatise on mechanics covering automata, pneumatics, ballistics, the construction of harbours, the defence and siege of towns and their various applications to the mechanics of war. Philo was a young contemporary of Ctesibus (285–222 BC), founder of the Alexandrian school of mechanists, who invented the water organ and was famous for his water-clocks. What is interesting about al-Jaziri's *Book of Knowledge of Mechanical Devices* is that it contains no military machinery. It is confined in the main to useful irrigation devices, fanciful labour-saving gadgets and machines to entertain and amuse, such as water-clocks, mechanical flutes and such items as 'musical wine dispensers'. As a source of wonder, automata held a special place in the Byzantine and Muslim worlds. They served as spectacular devices in the throne rooms of Constantinople and Baghdad where they were designed to impress and overwhelm visiting ambassadors. In the tenth century, Liutprand of Crapona, the German ambassador, describes one such mechanism in the throne room of the Byzantine emperor Constantine VII.

> In front of the emperor's throne was set up a tree of gilded bronze, its branches filled with birds, likewise made of bronze gilded over, and these emitted cries appropriate to their different species. Now the emperor's throne was made in such a cunning manner that at one moment it was down on the ground, while at another it rose higher and was seen to be up in the air. The throne was of immense size and was, as it were, guarded by lions, made either of bronze or wood covered with gold, which struck the ground with their tails and roared with open mouth and quivering tongue.[33]

Earlier, in 917, the ambassadors of Constantine VII visited the caliph Muqtadir in Baghdad to discuss the ransoming and exchange of prisoners. According to Hitti, after confronting a vast array of footsoldiers, eunuchs, chamberlains and marching lions, they were conducted to the palace where: 'Especially impressed were they with the Hall of the Tree (*dar al-shajarah*) which housed an artificial tree of gold and silver weighing 500,000 drams, in the branches of which were lodged birds of the same precious metals so constructed that they chirped by automatic devices.'[34] We have already encountered a foretaste of this kind of courtly extravaganza in the gilt and copper-coated trees in Khumarawaih's palace at al-Qata'i. The real legacy of al-Jaziri's work was, however, less ostentatiously funnelled into more mundane practical works of hydraulic engineering. Of the other kinds of automata described by al-Jaziri, few surviving examples exist. One rare exception is the remains of a water-clock, built by Abu Sa'id, that stands opposite the Bu'Inaniya Madrasa in Fez, Morocco (1317).

An intriguing clock (not of the water variety) is illustrated in a copy of al-Jaziri's *Book of Knowledge of Mechanical Devices* in the Metropolitan Museum of Art, New York. The manuscript is dated 1315 and its place of origin is either Egypt or Syria. Full of wit and humour, this clock, in the form of an elephant carrying a tall howdah, expresses the entertainment value of such devices. It records the time every half hour through the actions of various figures and sounds of drum beats, whistles and gongs. An Indian *mahout* sits on the elephant's head, and beats it with a pickaxe and drumstick, while a dragon-headed serpent revolves as it is fed balls by a falcon operated by a man seated in the upper window of the howdah. Time is indicated by a pointing figure seated in the



ABOVE: 'Elephant Clock' from al-Jaziri's *Book of Knowledge of Mechanical Devices* (Metropolitan Museum of Art).



ABOVE: 'Hand-Washing Machine' from al-Jaziri's *Book of Knowledge of Mechanical Devices* (Freer Gallery of Art).

howdah and by various balls which drop into containers, marking, like an abacus, the number of passing hours.[35] Another contraption is a hand-washing machine illustrated in a leaf from the same manuscript, but in the Freer Gallery, Washington. Instead of a howdah surmounted by a bird, there is a domed pavilion with a bird perched on top and a female figure inside holding a towel and ewer. Water spills from the ewer into a basin and drains into the tank below where it raises a mechanism, like a ball-cock, and lifts the arm of the woman who presents you with the towel. The vine-scroll on the pavilion and the drawing of the woman's eyes, hair and ringlets reveal something of the stylistic persistence of Samarran and Fatimid art.

Among medical manuscripts *Dar'wat al-Atibba* (*The Banquet of the Physicians*) by Ibn Butlan reflects the pre-eminence of Cairo and Damascus as centres of medical learning during the thirteenth century. As previously mentioned, the intellectual climate of al-Hakim's reign had been stimulated by open debate between Ali ibn Ridwan of Cairo and Ibn Butlan of Baghdad. Ibn Butlan's work was still valued two centuries later and a manuscript illustrating *The Banquet of the Physicians* (1273) survives in the Ambrosian Library in Milan. It was produced in either Cairo or Syria and the text consists of a series of dialogues with eleven miniatures. One miniature, entitled *The Awakening Doctor Finds a Dinner Party Taking Place in his House*, shows the reclining figure of a turbaned doctor, propped on his elbow, holding forth to his students and servant. The composition is framed by cusped arches decorated with scrollwork and heart-shaped palmettes reminiscent of Fatimid art. There is a clarity, simplicity and humour to this design, and the surface is articulated by the curly, stylized drawing of drapery in the figures which echoes more floridly the scrollwork in the framing architecture. One curious feature is the two emblematic floating trays stacked with fruit and vessels. Such devices, according to Ettinghausen, are probably derived from the Mosul school of miniature painting.[36]

Of the books of fables and animals, two fourteenth-century manuscripts have been attributed to Egypt. One is in the Freer Gallery, Washington, showing a charming picture of a bear talking to two monkeys. The landscape background has a lightness of touch with a suggestion of spatial recession through the arrangement of grasses, plants, a meandering stream and gnarled tree with feathery leaves. Ettinghausen has identified here an interesting transmission of chinoiserie derived second hand from Persian miniatures.[37] He has also noted Chinese influence in a picture of two herons from the *Book on the Usefulness of Animals* by Ibn ad Durayhim al-Mawsili. This manuscript in the Escorial Library in Spain (1354) is also derived from a Persian miniature, but it retains its Far Eastern flavour in the calligraphic flourish of plants and feathers, the serpentine flow of the stream and the sinuous composition of the birds' necks, beaks and crests.



ABOVE: Bear and monkeys from a book of fables: fourteenth century (Freer Gallery of Art).

The *Maqamat* of al-Hariri provided the material for a number of Mamluk manuscripts. One version in the British Museum, thought to be from about 1300, shows the vagabond Abu Zayd preaching in the mosque at Samarqand. The authority of the Sunni caliphate is symbolized by the presence of the black Abbasid flags that festoon the top of the *minbar* and the Abbasid black of Abu Zayd's dress and sword.[38] The architecture of the mosque, with its three horseshoe arches, mosque lamps and precisely drawn *minbar*, provides a detailed backdrop for the three figures listening intently to Abu Zayd's address. They form a compact group with haloes round their heads, and the wrinkly treatment of the drapery in the figure on the left is characteristic of this Mamluk school of painting with its stylistic origins in the art of northern Iraq.

The richest and most sophisticated illustration of the *Maqamat* series is the frontispiece to a manuscript in the Nationalbibliothek, Vienna. It was probably produced in Egypt in the early fourteenth century and displays an enthroned prince



ABOVE: Frontispiece to the *Maqamat* of al-Hariri: early fourteenth century (Nationalbibliothek, Vienna).

BELOW: The *Maqamat* of al-Hairi: Abu Zayd in his tent.



surrounded by courtiers, musicians, winged genies and an acrobat. The subject matter is the court, and like the frontispieces to the Mosul *Book of Songs* (1219), it does not illustrate the text but forms a ceremonial prelude. The figures have Mongoloid features and their costumes have distinct Mongol, Turkish and Persian characteristics. With all their costume detail the figures are incorporated into a busy, flat surface pattern, and all movement and gesture is subordinated to the decorative whole. The contorted pose of the acrobat is inert but its decorative form is highly inventive. The figures form a dense collage integrated into a surface wreathed with loops, swags and festoons formed by scarves, belts, braids, borders and arabesques. This medley of decorative form is extended and echoed in a broad arabesque border similar to those in Qur'anic illumination.

In the rest of the manuscript the narrative is presented with great economy of means and, unlike the crowded frontispiece, the stories are told through a handful of people. Standing against a background of gold leaf the figures are stocky and puppet-like, and the staging of these scenes is achieved by the simplest of properties and backdrops. All that is needed is a curtain to indicate the interior setting of 'Abu Zayd pleads before the Qadi of Ma'arra'. For 'al-Harith talks to Abu Zayd in his Tent', the scenery consists of a tent in a nocturnal setting, suggested by the crescent moon and stars painted on a schematic skyline above. The faces of the figures are stereotyped and differentiation is indicated only by hair, skin colour or the occasional beardless individual. Expression is eloquently indicated through hand gesture rather than facial expression, and in general, it is tempting to wonder whether these scenarios were influenced by the popular genre of shadow plays.[39]

In his summary of the defining aspects of Arab painting, Ettinghausen gives great emphasis to the links between Arab and Hellenistic, Roman and Byzantine cultures. According to him the treatment of drapery, the monumental figures and the expression

of speech through gesture demonstrate the continuity of Byzantine classicism within Mamluk painting. Dialogue and gesture signify the importance of rhetoric within Arab culture, and the decorum and sign language of the Greeks, seen in Byzantine mosaics, was absorbed into Arab painting. In the domain of literature, Ettinghausen also sees the role of dialogue, whether through persons or animals, as the bond between such works as the *Maqamat* and *Kalila and Dimna* fables. Also springing from the Hellenistic tradition he notes the use of architectural representation as a persistent theme in works attributed to Syria. A more obvious example of the symbiotic relationship between Arab and Greek culture can be seen in the numerous illustrated scientific works on astronomy, medicine, botany and mechanics. Of Eastern influences on Arab painting Ettinghausen singles out the theme of royalty, with its roots in pre-Islamic Persia, as a dominant theme, but he qualifies his definition of the East by pointing out that Sassanian art was an Eastern mutation of late classicism.[40]

Eastern influences, however, became more manifest in the decorative arts as a whole as the Arab world became increasingly dominated by Persian and Turkish culture. A fourteenth-century manuscript in the Library of the Süleyman Mosque, Istanbul, illustrating *The Disclosure of Secrets* (dealing with the purpose of plants, birds and animals), by Ibn Ghanim al-Maqdisi, shows a synthesis of Mamluk and Persian styles. The architectural framework and classical form of the drapery suggest Syrian origin, but the symmetry, surface decoration and spatial ambiguities show Persian influence. Such hybridization is indicative of the ascendency of the Persians and Turks in the Arab world, and, like the impact of chinoiserie, it reflects the Eastern taste and origins of the ruling Mamluk class. Eastern influences might also be explained by the number of migrant artists seeking refuge in the Mamluk empire after the Mongol invasions and the subsequent political instability of Persia. The presence of such artists could also account for one significant innovation that occurred in the late fifteenth century – the sudden appearance of knotted pile carpets in Egypt.

Carpets

The development of knotted pile carpets seems unprecedented because there is no evidence that Egypt had any tradition for this kind of knotted pile weaving with its asymmetrical Persian knot. The knotting technique is Persian, but the designs, with their



ABOVE: The Simonetti Carpet: late fifteenth to early sixteenth century (Metropolitan Museum of Art).

characteristic use of octagons, are foreshadowed in much earlier Coptic carpets such as the rare fragment in the Kier Collection, Richmond, England, which is thought to date from between the eighth and tenth centuries.[41] As far as contemporary designs are concerned, Mamluk carpets bear a closer relationship to the frontispieces of Qur'anic illumination than other forms of textiles. Besides octagons, new motifs appear, and the inclusion of palm trees, papyrus and lotus motifs makes them distinctly Egyptian. A notable example in the Textile Museum, Washington, shows a typical layout with a sixteen-sided stellar figure at the centre of a square made up of rosettes and shifting patterns of overlapping hexagons and heptagons. The panels above and below, which in illuminated manuscripts would normally display calligraphy, contain alternating cypresses and palm trees. The borders are filled with medallions and cartouches, and like most Mamluk carpets, the colours are light green and blue on a burgundy red background. Other carpets are typically Mamluk in their display of geometric complexity. In early Mamluk rugs it is the octagon that generally dominates the field but often shapes interpenetrate, creating ambiguities that blur the distinction between major and minor patterns. Besides palm trees, cypresses, lotuses and papyrus plants, a distinctive feature of Mamluk carpet arabesque is the use of umbrella-shaped leaves that unite the field in endless permutations.

One of the most beautiful surviving carpets, known as the Simonetti Carpet, is in the Metropolitan Museum of Art, New York. This has a complex five-unit field design made up of a series of radiating eight-pointed stars and lobed rosettes. The permutations of concentric rosettes, octagons and squares emphatically demonstrate the continuing ingenuity of geometric design in this late flowering of Mamluk art. The radiating patterns here differ from those in illumination and metalwork and the design is more expansively and statically organized. The close-toned nature of the colour, with its subtle balance of reds, greens, blues and khakis (reminiscent of a Mark Rothko painting), gives it a remarkable pulsating resonance. Such qualities are maximized under its exquisite lighting and setting in the Metropolitan Museum where it is one of the highlights of the Islamic collection.

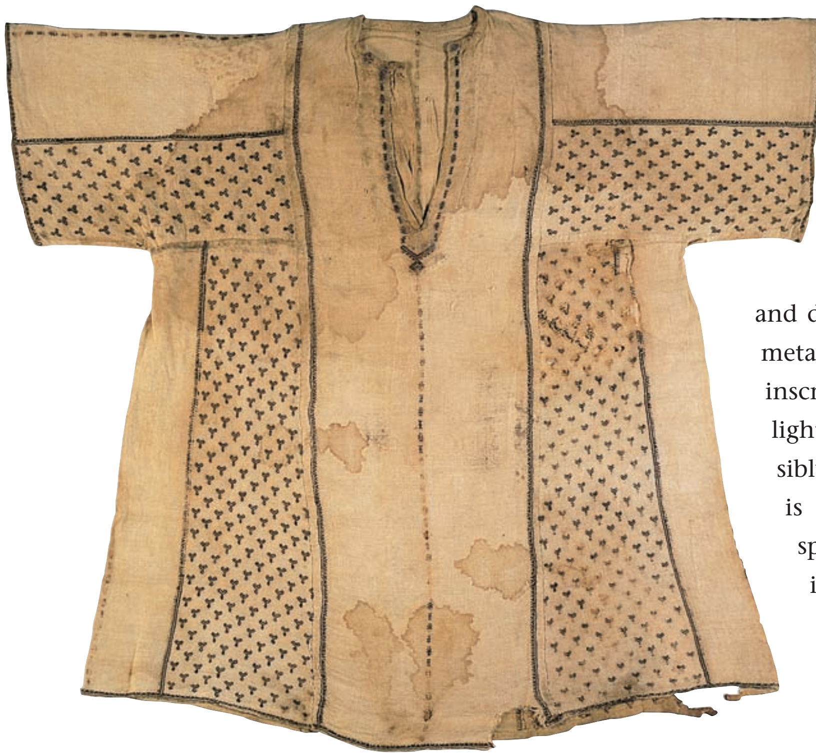
Such carpets were successfully exported to the West and were particularly popular in Italy, where they were catalogued as 'Cairino' carpets. In the sixteenth century they were collected by the Medici family and they formed a significant part of the internal decor of the Pitti Palace in Florence. Mamluk carpet production

also thrived after the Ottoman conquest and was later enriched by floral elements absorbed from Ottoman design. The carpets were much admired by the Ottoman Turks and in 1585 Murat III invited eleven weavers from Cairo to set up a workshop in Istanbul. In general, carpet weaving was one of the few success stories among the decorative arts during the late Mamluk period.

Textiles

Like the Cleveland mantle and Victoria and Albert Museum copes discussed earlier, most of the best-preserved examples of Egyptian textiles are those that entered the cathedrals of Europe and were used as vestments and relic adornments. Also in the European domain a number of Italian paintings depicting Mamluk textiles provide valuable information on their appearance as well as giving evidence that luxury textiles from Egypt were a valued commodity in the West. Textiles found in Egypt consist of more humble items and survive mainly in fragments. The overall picture of Egyptian textiles is like an incomplete jigsaw puzzle and unlike the other decorative arts, they are more difficult to categorise or trace chronologically. However, we can piece together from this evidence a reasonable picture of textile decoration, everyday dress, soft furnishings and household items. It is the graves and rubbish mounds of Fustat that have yielded most of these woven and embroidered fragments (as well as pieces of carpet which include the earliest surviving examples of imported Abbasid and Seljuk carpets). Coming mainly from these sources, one of the most comprehensive collections of embroidered textiles is the Newberry collection in the Ashmolean Museum, Oxford. Much of this collection, created by Professor Percy Newberry and his wife Essie, has recently been published by Marianne Ellis.

It consists mainly of embroidered fragments of *tiraz*, decorative bands, tunics, scarves, sashes, girdles, handkerchiefs, samplers, towels, tabs, wrappers and covers from the Tulunid, Fatimid, Ayyubid and Mamluk periods. Some notable items, such as a child's tunic and a number of Mamluk caps, have survived completely intact. However, most are fragments and their function and size have been a matter of conjecture because dealers have sold only the embroidered parts and disposed of the main cotton and linen fabric that made up the bulk of the items.[42] Among the Ayyubid fragments there are two beautiful decorative bands and inscriptions embroidered on linen with silk thread. Typical of Ayyubid art, they



ABOVE: Child's tunic: late fourteenth to early fifteenth century (Ashmolean Museum, Oxford).

are intricate and concentrated in design. One shows a delicate interlacing medallion amid tightly wound scrolls set with interlaced patterns based on plaited Kufic. The lobed shape of the medallion and the interlacing arabesque is similar in composition and design to contemporary inlaid Ayyubid metalware. The other embroidered Ayyubid inscription is set in dense scrollwork and light, delicate embroidered filigree. It possibly decorated a shawl and reads, 'Love it is that keeps the eloquent man from speech'.[43] The sentiment expressed in the inscription is very different from the formal honorific titles found in embroidered *tiraz*. As for embroidered Mamluk inscriptions, they reveal expressions of good wishes similar to those that adorn pottery and metalware. A fragment in the Newberry collection states in bold unadorned red Thuluth script, 'Glory and eternity to the owner', and in the Musée d'Art et d'Histoire, Geneva, there is a beautiful embroidered Mamluk inscription that reads, 'Happiness and eternal prosperity'. It is embroidered in Naskhi script set against an intricate arabesque of plaited motifs similar to those seen in the illustrated Ayyubid fragment.[44]

In contrast to these fine scrolling arabesques, there are a number of items in the Newberry collection showing an interesting repertoire of angular geometric designs, including hexagons, lozenges, hooks, and S and Z motifs. They are a part of an international language of geometric design and appear in contemporary Seljuk carpets. Among early examples is an Ayyubid sampler. These provided a selection of patterns for prospective customers to choose from, and most intriguing in this example is the appearance of birds and fish in the otherwise iconoclastic art of the Ayyubids. Another Ayyubid sampler shows a selection of V-shaped patterns with pendants designed to border the neck slits of garments. Such patterns and formats endured well into the Mamluk era and an example can be seen on a well-preserved child's tunic in the Newberry collection. This is one of those rare specimens found intact showing the simple T-shape of

these garments that generally have greater width than height. The design of the neck border is like a necklace, unlike the more robust geometrical borders found in samplers and other tunics, such as that dating from the fifteenth century in the Newberry collection.[45] This shows a richly embroidered collar as well as quaintly stylized animals and tassel motifs. Other embroidered fragments in the Newberry collection, such as that decorating the end of a trouser leg, provide revealing details about Mamluk dress and the popular taste for vertical and diagonal striped patterns.



ABOVE: Mamluk cap (Ashmolean Museum, Oxford).

Among the most attractive and best-preserved items in the Newberry collection are a number of Mamluk caps embroidered with silk patchwork, eyelets, gilded leather strips and metal threads. One, displaying a long yellow silk tassel, is covered in bright red silk with patchwork on the sides and crown, sprinkled all over with eyelets that form roundels, rosettes, medallions and finials. The other is covered with blue silk decorated with sunburst motifs and the fleur-de-lis blazon that was associated with Sultan Qala'un.[46] Among other embroidered blazons in the collection are two lions which probably date from the reign of Baibars.

Finally, one distinctive design in the Newberry collection is a roundel made of patchwork inlay with a star at the centre formed by interlacing stems, lanceolate leaves and palmettes. This interlacing design can be seen in the other arts of the period such as the *sgraffiato* goblet-shaped bowl in the Victoria and Albert Museum described earlier. Similar designs can be seen today in the appliqué work sold in the tent-makers' bazaar near Bab Zuwaila.

After the Black Death in 1348 the textile industry went into steady decline, the *tiraz* factories closed and between 1394 and 1434 the number of silk looms in Alexandria fell from 14,000 to 800.[47] With the exception of the brilliant age of Qa'it Bay, when all the arts flourished, the decorative arts went into a steady decline. Intermittent plague, despotic government, mismanagement and economic decline marked the fate of Egypt during the fifteenth century. The final blow came when the Portuguese discovered direct trade routes to India, and Egypt became marginalized and deprived of her monopoly over the spice trade. Such factors had a devastating impact on the decorative arts, but architecture fared much better and the Burji Mamluks, as we shall see, did leave some outstanding buildings for posterity.

Chapter Seven

The Architecture of the Burji Mamluks

The Burji Mamluks were a regiment of Circassians recruited from the Caucasus. They were established by Qala'un and originally formed a palace guard of approximately 3,700 men. They were called Burji, meaning 'from the tower', because they were garrisoned in the towers of the Citadel. Ethnically they differed from the Bahris, who were principally Turks, and their loyalties were to the various household factions associated with the sultans Barsbay, Barquq, Jaqmaq, Mu'ayyadad Shaykh and Faraj, rather than the Mamluk state per se. These households broadly formed four groups, the Ashrafiyya (Barsbay), Zahiriyya (Barquq and Jaqmaq), Mu'adiyya (Mu'ayyad Shaykh) and Nasiriya (Faraj).[1] This factionalism, and the lack of any constitutional form of heredity, caused much turmoil during the Burji regime. The hereditary principle had loosely applied to Qala'un's successors, thus securing a degree of dynastic stability, but no such system emerged under the Burjis. The sultans were elected as a consequence of political lobbying, and power depended on their skill in managing the various factions that supported them. This invariably led to weak government because the sultan's office rested on patronage and favour, or divide and rule, and few exercised much power over their amirs. As a consequence the Mamluk amirs, as a ruling class, became a law unto themselves.

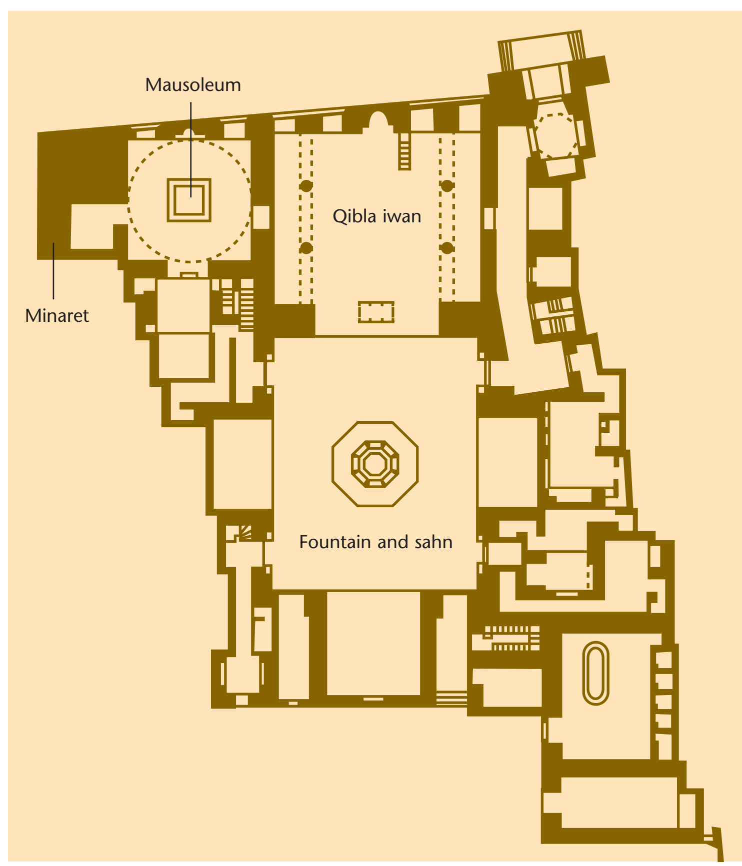
Al-Zahir Barquq, the first sultan of the Burji dynasty, overthrew the last of the Bahri Mamluks, al-Hajji II (a child at the time), in 1382. Seven years later he suffered a serious military defeat in Syria and al-Hajji was restored to the throne. After a year in exile, Barquq built up enough military support to oust al-Hajji again, whose second

reign ended in 1399. Both reigns were marked by political rebellion in Syria and the threat posed by Tamerlane, whose ambition and ruthlessness exceeded that of Chengiz Khan. Despite Tamerlane's penetration into northern Syria, Barquq held firm by forming a series of alliances, including one with the Ottoman Turks led by Beyazit I which bought time and held Tamerlane in check. It was, however, an uneasy alliance, because the expanding Ottoman empire posed as much a threat to the Mamluks as Tamerlane. The Ottomans later occupied the Mamluk cities of Malatya and Elbistan (in the upper valley of the Euphrates), and it was Tamerlane's victory over Beyazit at the battle of Ankara in 1402 that temporarily relieved the Ottoman pressure on Egypt. The conquest of Constantinople in 1453 caused much rejoicing in Egypt when Sultan Inal decorated the streets of Cairo, but this rare spirit of concord between the Mamluk and Ottoman empires was short-lived, and throughout the Burji period Egypt justifiably sat uneasily with her powerful Ottoman neighbour.

BELOW: Fountain and *sahn* of the *khanqah-madrasa* of al-Zahir Barquq.



Barquq's main architectural contribution to Cairo is his *khanqah-madrasa* (1384–6) in al-Mu'izz street, next to the *madrasa* of al-Nasir Muhammad and the Qala'un complex. Its broad plan, consisting of a mausoleum adjacent to a cruciform *madrasa* with an extended prayer hall in the *qibla iwan*, resembles its Bahri neighbours. However, the symmetry of its central *sahn*, and the four *iwan*s facing the ablutions fountain, relate it more closely to Sultan Hasan's mosque. Other features resembling Sultan Hasan's mosque are the imposing entrance, with its trilobed *muqarnas* hood, and the tall domed vestibule. Unlike the other buildings, it combines the function of a *madrasa*, teaching all four *madhahib*, with a *khanqah*. The inclusion of the *khanqah* is significant, being indicative of Barquq's esteem of the Sufi orders – something that finally persuaded him not to be interred here but closer to the Sufi sheikhs buried in the Eastern Cemetery. Nevertheless, his mausoleum was intended as an important family tomb for his father, sister and children.



ABOVE: Plan of the *khanqah-madrasa* of al-Zahir Barquq.

According to Michael Rogers it had long been the practice to build mausolea as a part of a religious foundation in order to appease the *ulama* (learned authorities), who generally disapproved of ostentatious tombs.[2] The *khanqah-madrasa* of Barquq, like many of the buildings we have observed, is a *waqf* foundation. A *waqf* is a religious trust, usually in the form of land or property, perpetually endowed for charitable purposes. Such institutions have their origin in the Byzantine system of pious establishments known as *piae causae* (another example of the absorption of Greek custom into Islamic culture). A *waqf* was a form of investment and the patron would draw up a legal document (*waqfiyya*) stipulating the manner in which the property was to be administered along with details of rents and other forms of income, such as the sale of produce (if the *waqf* had land). The descendants of the founder received these benefits in perpetuity and according to Rogers the success of this system of 'legalized self-interest' explains the number of such institutions and the excellence of Mamluk architecture.[3]

Like the interior plan, the exterior of Barquq's *khanqah-madrasa* combines features common to both Qala'un's complex and Sultan Hasan's mosque. The façade is taller than its neighbours, crowned with fleur-de-lis crenellation, and divided vertically by the entrance portal and six shallow square-headed recesses. The recesses are pierced by rectangular window grilles at ground level and pointed-arched windows above. The oculi piercing the projecting sections of the wall have unusual wooden ('matchwood') rather than stucco grilles. Like the Qala'un complex it has a *tiraz* inscription band across the façade, but here it is placed higher, above the second storey windows. The minaret has three superimposed octagonal shafts, and the high relief pattern of interlaced circles and inlaid stone on the second is something of an innovation, anticipating the virtuosity of late fifteenth-century stone carving. The dome is a nineteenth-century reconstruction in brick of the wood and plaster original.

On first acquaintance, the *sahn* with its four facing *iwan*s looks like a smaller version of Sultan Hasan's mosque. The *qibla iwan* is divided basilican style, like Qala'un's prayer hall, by triple arcades into a nave and side aisles. The four pink granite columns are Pharaonic, originating from Memphis, but salvaged later from the ruins of al-Salih's palace on Rawdah Island. Unlike Sultan Hasan's mosque the *qibla iwan* is not vaulted but covered with a beautifully painted and gilded flat roof (recently restored). The glittering surface is faced and moulded in stucco, with shell-shaped coffers, one large and four small, set in an arabesque of rosettes.

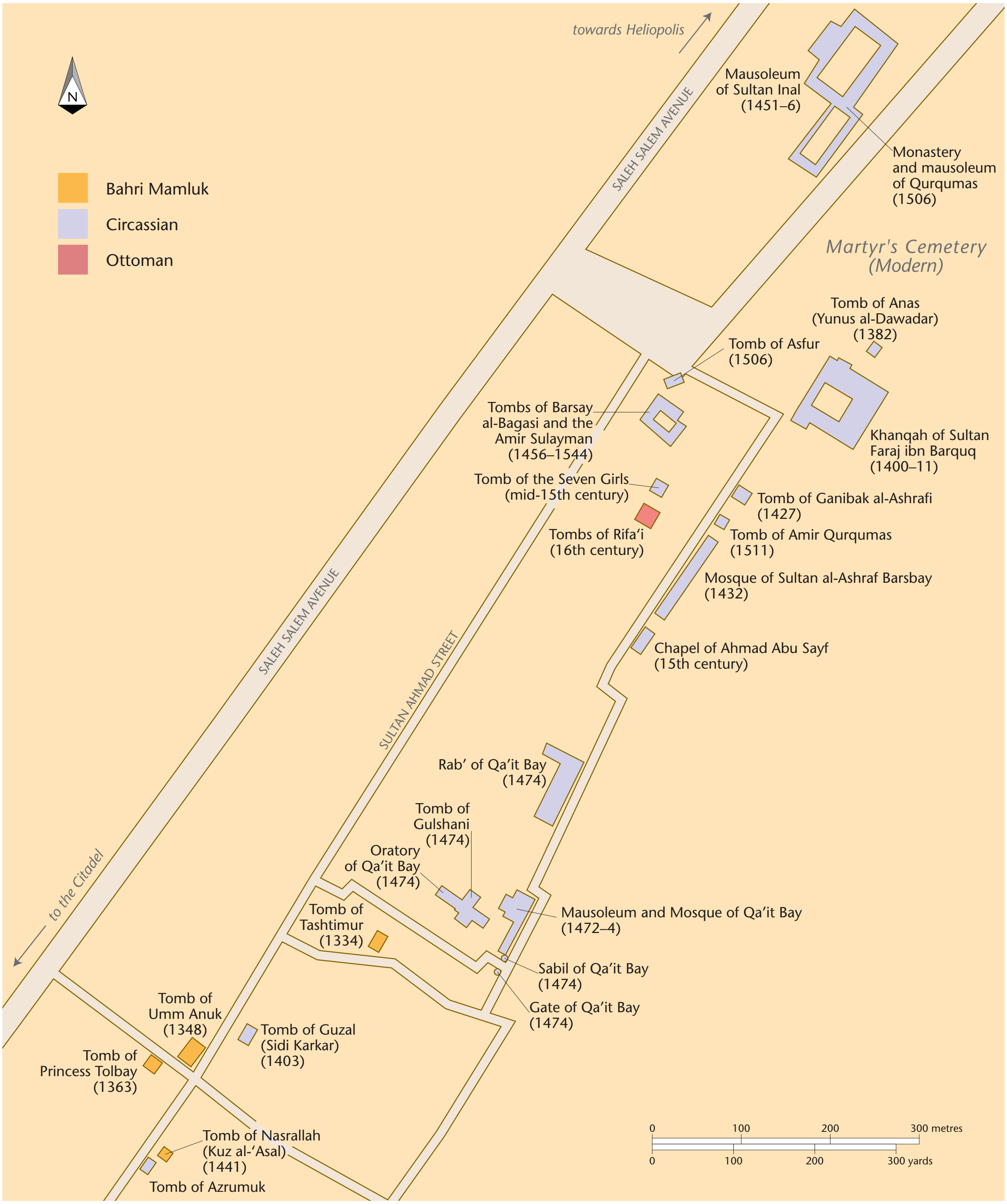
The *qibla* wall is richly panelled with marble, and the *mihrab* is likewise made up of polychrome marble with other materials including mother-of-pearl, blue faience, bitumin and glass paste. Many of these materials were substitutes for coloured marble due to the chronic shortage of materials at this time, and according to Rogers, this explains much of the building's decorative ingenuity.[4]

The *qibla iwan*, devoted to the Hanafi *madhhab*, is the largest; next in size is the north-west *iwan* opposite, followed by the flanking north-eastern and south-western *iwan*s – which are of equal size, but much smaller than the others. This arrangement emphasizes the longer south-east axis towards the *qibla* wall. Unlike the *qibla iwan*, the other *iwan*s are vaulted with beautiful zigzagging bi-coloured stone inlays. One unusual feature in the *sahn* is the use of dog's tooth moulding above the corner recesses. A small open court leads to the mausoleum which is entered through a *mashrabiyya* door. Its interior provides a splendid display of polychrome marble panelling. The dado is made up of three horizontal courses, the first two consisting of thin vertical strips of brown, white, pink, orange and ivory-coloured marble panels. The third is made up of square panels enclosing large discs, and the rectilinear repose of the whole is offset by the lively zigzagging patterns of the fretted voussoirs over the entrance. Running continuously around the room, above the dado, is a gilded wooden frieze in Naskhi script. Above this, and springing from the corners, are wooden pendentives made up of richly painted and gilded *muqarnas* carrying a sixteen-sided drum with alternating windows and blind panels. Windows with stained glass set in stucco grilles frame the *mihrab* and the same intensity of colour and pattern is repeated in the smaller windows around the drum.

Barquq's desire to be buried near the Sufi sheikhs in the Eastern Cemetery was realized by his son Faraj. He transferred Barquq's body to a mausoleum in his new *khanqah* built in the Eastern Cemetery between 1400 and 1411. Faraj's monumental work at the northern end of the necropolis began a process of urbanization in the area and set a precedent for building mausolea, *madrasa*s and *khanqah*s in the Eastern Cemetery throughout the fifteenth century. However, it was not just the trend set by Faraj that explains the burial of so many Mamluks here, but the belief that in the presence of the holy sheikhs they could share their *baraka* (blessing) for eternity. Like the Southern Cemetery, the tombs of the sheikhs attracted numerous pilgrims (the annual pilgrimage to Mecca was rerouted through this area) and consequently several mosques, *madrasa*s and *khanqah*s were built, providing ample



ABOVE: View of the Eastern Cemetery.



ABOVE: The Eastern Cemetery.

accommodation for visitors, students and Sufis. The Eastern Cemetery evolved more like a residential suburb, and although many of these foundations no longer exist, it still sustains a thriving community with funerary monuments existing cheek by jowl with ramshackle housing, shops and streets.



ABOVE: The domes of the *khanqah* of Faraj ibn Barquq.

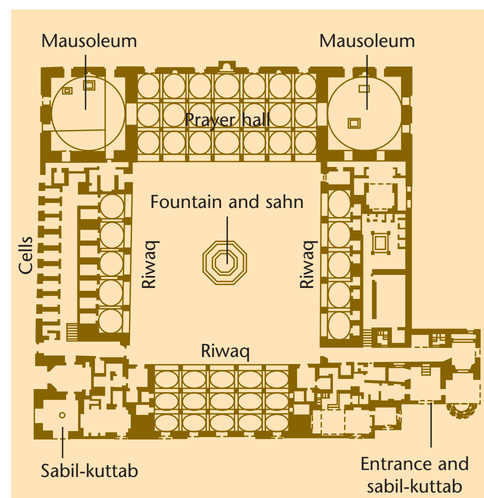
The *khanqah* of Faraj ibn Barquq is the largest in Cairo, and its desert location allowed for a free-standing symmetrical structure unlike those cramped irregular buildings that line al-Mu'izz street. During the reign of Baibars it had been the site of a hippodrome and Faraj intended to develop the area to include a hospice, market, baths, bakeries and other ancillary buildings. Forty Sufis were appointed to the *khanqah* and residential accommodation was provided, but whether it also served as a *madrasa* is uncertain. The roles of *madrasa* and *khanqah* became somewhat conflated during the Burji Mamluk period and architecturally the two institutions are generally indistinguishable. Teaching was a central concern for both Sufis and the *ulama*, and the study of law and *Hadith* was

common to both institutions. The difference lay in the teaching of mysticism which formed the heart of Sufi doctrine. This would be studied within the *silsila* (tradition) of the founding sheikh of a given order. In many parts of the Muslim world *khanqah*s grew round the mausolea of sheikhs, but one significant difference in Cairo's *khanqah*s is the laical nature of the mausolea. They are generally dynastic tombs containing the bodies of ruling sultans, amirs and their families rather than sheikhs, and Michael Rogers suggests that this may be indicative of state control over the Sufi orders.[5]

The north-western façade of Faraj's *khanqah* is flanked by two features known as *sabil-kuttab*s. These attractive two-storeyed structures consist of Qur'an schools placed over public fountains. Such combinations became a feature of fifteenth-century mosque architecture but they also later appeared as separate buildings, forming a distinctive part of Cairo's urban landscape. The Qur'an schools are characterized by the open design of their windows and balconies, and the ground-floor *sabil*s by their iron window grilles from which water was dispensed. In Faraj's *khanqah* these features, with their sloping wooden canopies, balcony screens and terracotta patterns of *ablaq* masonry, relieve the weight of the monumental north-western façade. Its horizontal sweep is broken vertically by the trilobed portal at the western corner and six square-headed recesses pierced by rectangular windows and an oculus. From behind the façade rise two richly carved imposing minarets, 52 metres high, consisting of three shafts separated by fretted balconies on *muqarnas* corbels. The first shaft is rectangular with recessed, trilobed windows set behind projecting balconies supported by *muqarnas*. The second is cylindrical with interlacing patterns, and the third is an open eight-columned pavilion surmounted by a bulbous finial.

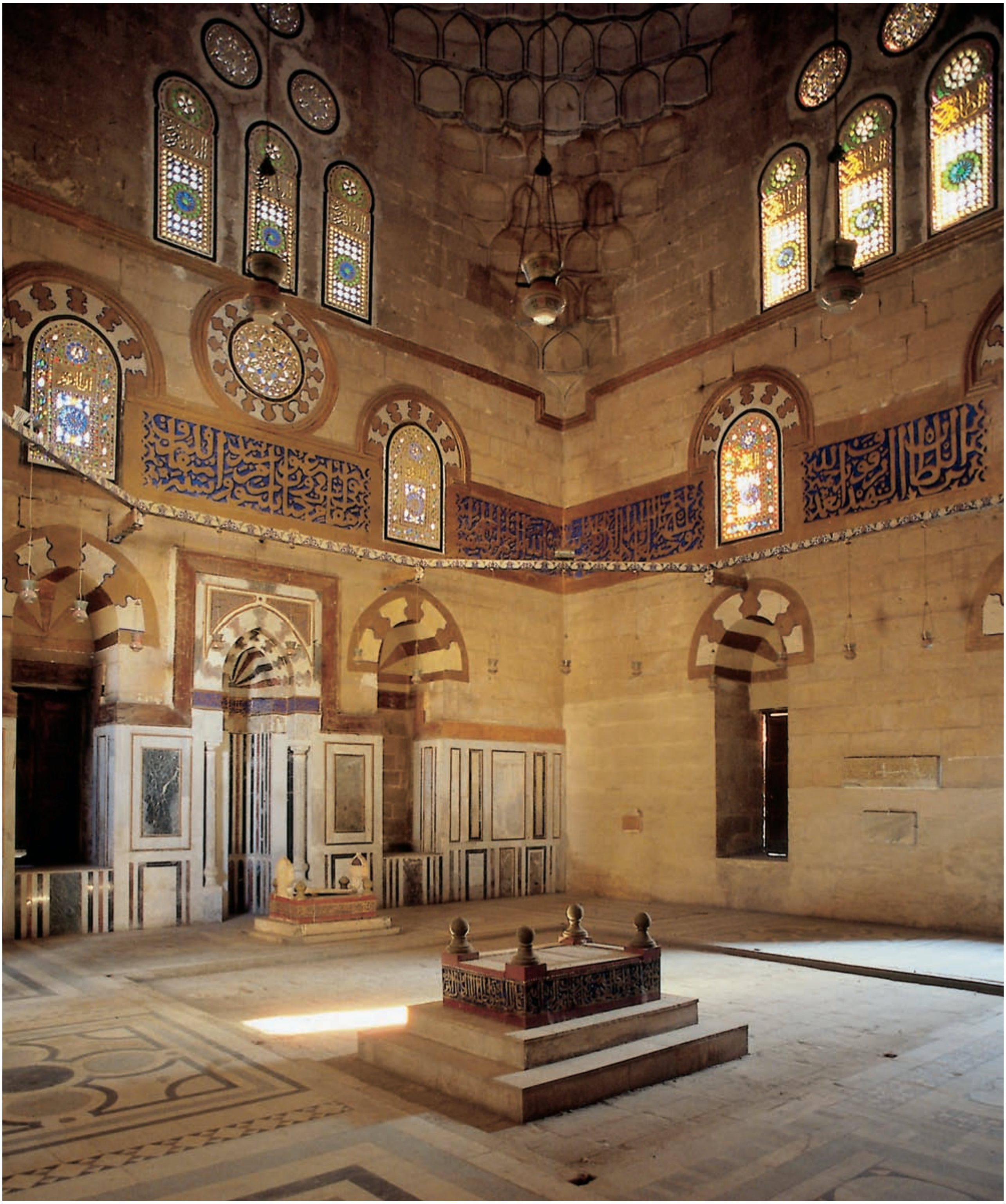
The main entrance is lined with alternating courses of terracotta and biscuit-coloured stone, and the trilobed *muqarnas* hood is handsomely framed with a rectangular panel filled with arabesque and inscription medallions set against a blue background. It leads to a vestibule, and a long corridor ends in the spacious central *sahn*. The interior plan is of the hypostyle type with a prayer hall consisting of seven tall arcades, three bays deep, covered with shallow brick domes. The *riwaq*s on the north-east and south-west sides are single-aisled structures of five arches, vaulted with shallow brick domes both circular and oval in plan. The *riwaq*s give access to cells on the ground floor, and staircases behind the *riwaq*s lead up to residential accommodation on the second floor. Other ancillary rooms occupy the space behind the





TOP: The *khanqah* of Sultan Faraj ibn Barquq.

ABOVE: Plan of *khanqah* of Sultan Faraj ibn Barquq.



ABOVE: One of the mausoleum chambers in the *khanqah* of Faraj ibn Barquq.

south-western *riwaq*. The *riwaq* opposite the prayer hall is three bays deep and vaulted with domes that are oval in plan. The depth of this structure, echoing the prayer hall on a smaller scale, is reminiscent of the area known as the *suffah* which provided shelter for students and the poor in the Prophet's mosque at Medina.

The arcades spring from sturdy piers, and the lack of decoration gives the *sahn* a monumental simplicity in keeping with an institution designed for dervishes. The only decorative note in this austere interior is the delicate carving of Qa'it Bay's stone *minbar*. Architectural elaboration is confined to the towering minarets and imposing mausoleum domes that flank the prayer hall. These stone domes with their crisp herring-bone patterns are the largest in Cairo (over 14 metres in diameter). The ingenuity of these zigzagging patterns inaugurates a significant development in dome construction and decoration. The geometric complexities so far confined to the decorative arts now begin to find their expression in fifteenth-century Mamluk dome construction in the most remarkable way. Another innovation can be seen in the use of scrolling, rather than stepped, stone-work in the corners of the zone of transition. The domes cover two family mausolea; the men are buried in the mausoleum on the eastern side of the prayer hall and the women in the west.

The large *mashrabiyya* screens leading to the mausolea consist of stellar patterns made of 'matchwood' rather than bobbins, similar to the window grilles of Barquq's *khanqah-madrasa*. In comparison to the simplicity of the prayer hall and *sahn*, one is immediately impressed by the contrasting richness of these interiors. These are dynastic tombs and they express an opulence and grandeur appropriate to their station. With some variations, the decorative scheme of both tombs is broadly the same. The *qibla* walls have dados decorated with white marble divided by tall vertical panels and elegant stripes. The *mihrab* hoods are framed with joggled voussoirs and the vertical thrust of the niches is emphasized by marble stripes and flanking colonnettes. Similar voussoirs frame the tops of a series of paired, pointed, recessed windows, set at ground level, flanking the *mihrab*, and piercing the other walls (except those giving access to the prayer hall). Variations of these joggled fretwork patterns are repeated in the ranks of second-storey windows and around the oculi. These windows are joined horizontally by a continuous frieze of gilded calligraphy set against a blue background, and as the eye explores the upper reaches of the mausolea, there is an increasing elaboration

through the jewel-like intensity of stained glass set in stucco grilles and the painted arabesques in the domes.

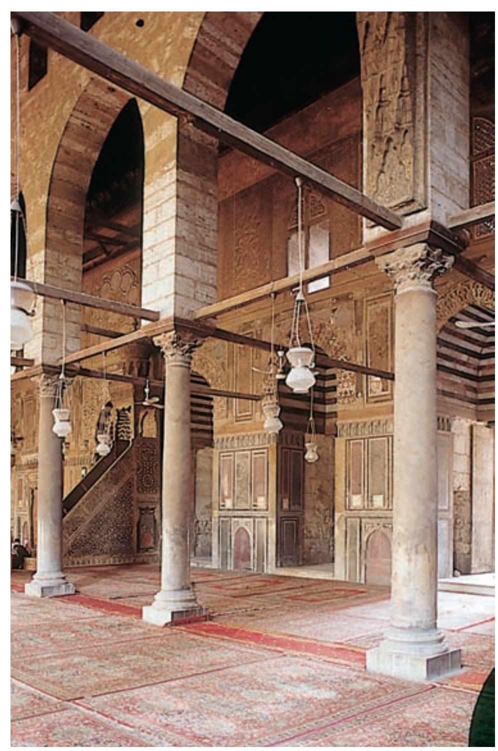
Faraj's turbulent reign was dominated by problems in Syria. He succeeded to the throne as a boy and immediately faced rebellion in Syria, where the amirs refused allegiance. Their actions weakened the country, and when the fragile Mamluk and Ottoman alliance broke down, Tamerlane seized the opportunity of occupying Aleppo, Hamma, Homs and Damascus. It was during this occupation that the great historian Ibn Khaldun, in the company of the young Faraj, visited Tamerlane in Damascus in 1401. Ibn Khaldun was impressed by the great world conqueror and wrote for him his short history of North Africa, as well as leaving an account of this famous meeting for posterity. Tamerlane's death in 1405 did not provide Egypt with much respite. The economies of Egypt and Syria were ruined by the war and Egypt was further ravaged by plague and famine. Faraj was eventually assassinated and after the short interregnum of the Abbasid caliph al-Musta'in, al-Mu'ayyad Shaykh seized power. Faraj was the last sultan to assume power by hereditary means and thereafter the succession became a bitter power struggle aggravating and undermining the constitution of the Mamluk state.

Sultan al-Mu'ayyad Shaykh (1412–21) had been the slave of Barquq and during the course of his topsy-turvy career had suffered several bouts of imprisonment, including a spell in the notorious Khazanat al-Shama'il prison near Bab Zuwaila. It was while he was incarcerated there that he vowed, should he be released, to destroy the prison and build a mosque on the site. This he eventually achieved, replacing the prison with an impressive complex consisting of a mosque, mausolea, *khanqah-madrasa* and baths (1416–21). At the same time (1418–20) he also built a *maristan* near the Citadel. The *khanqah-madrasa* is situated at the southern end of al-Mu'izz street next to the Bab Zuwaila, and its twin minarets, forming one of the most impressive landmarks in the city, were built on top of the Fatimid gate. The mosque fell into a ruinous state during the nineteenth century and today only the buildings on the south-eastern side – the vestibule, mausolea and prayer hall – have survived. The *riwaq*s no longer exist and the *sahn*, with its ablutions fountain, has been turned into a garden full of shrubs and trees.

The entrance portal on al-Mu'izz street, with its trilobed *muqarnas* hood and black and white *ablaq* masonry, has the added grandeur of a *pishtaq*. It is also enhanced by Sultan Hasan's bronze doors. These were taken from Sultan Hasan's mosque under dubious legal circum-

stances, but as Michael Rogers observed, 'In Islamic architecture the sincerest form of flattery has generally not been imitation but theft'.[6] The doors were not the only recycled material used in the mosque; also incorporated into its fabric was a wooden Fatimid inscription frieze, now in the British Museum, which probably came from one of the Fatimid palaces in the Bab Zuwaila district. The other distinctive external feature is the dome of the north mausoleum, which has a scrolled zone of transition and herring-bone ribs similar to those on the *khanqah* of Sultan Faraj ibn Barquq. The entrance portal leads to a splendid groin-vaulted vestibule and a left turn leads to the prayer hall through the mausoleum. The plan, with two mausolea flanking the northern and southern sides of the prayer hall, is similar to that of the *khanqah* of Sultan Faraj ibn Barquq but this is the last of this type of royal hypostyle mosque. The prayer hall, with its polychrome marble panelling and gilded ceiling, is quite magnificent, and the presence of the *sahn* garden makes this a delightful oasis of peace in a crowded urban setting.

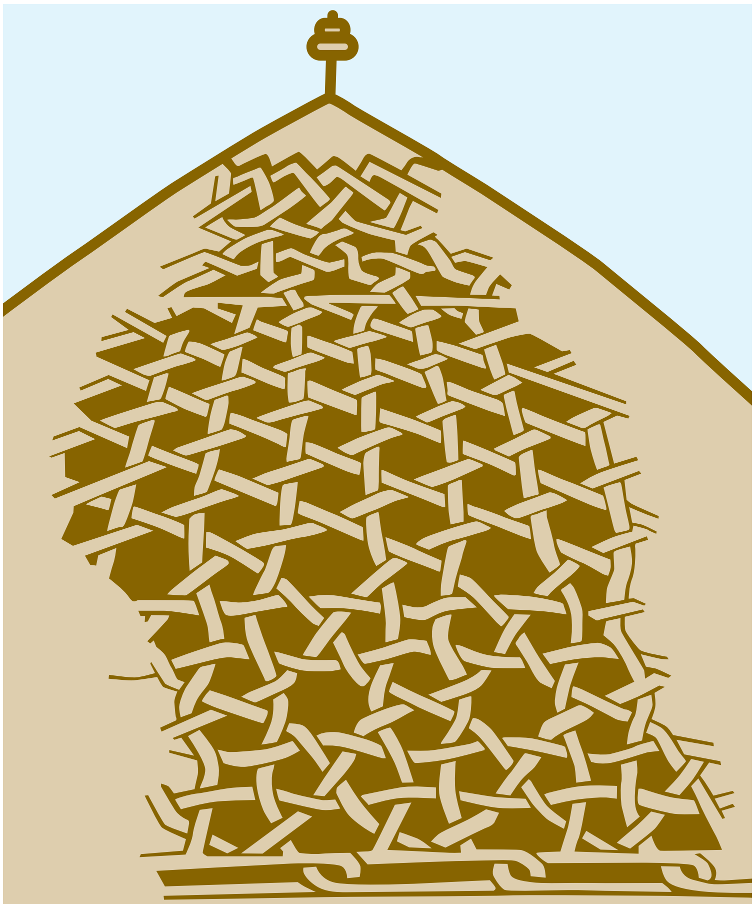
The prayer hall is three aisles deep and the antique columns support a richly painted and gilded wooden ceiling covered with arabesques. It is the polychrome marble panelling and stucco on the *qibla* wall that makes this one of Cairo's most outstanding interiors. The high dado consists of two registers of vertical terracotta and black, grey and white marble panels outlined in strips of black and white. These panels were recycled from old houses in Alexandria and this building, like the *madrasa* of Barquq, demonstrates the ingenuity of recycling during a period of great scarcity in both antique marble and wood (no marble had been quarried or imported since pre-Islamic times).[7] Above the panels is a thin horizontal band of blind trilobed arches with colonnettes made of turquoise glass. The *mihrab* is flanked with antique red granite columns crowned with *muqarnas* capitals and the niche is filled with geometric patterns of polychrome marble mosaic. Its crowning glory is the hood framed with a flamboyant display of radiating joggled voussoirs. Rising above the dado, variations of these fretted patterns are echoed in a more restrained manner around the arches of the ground-floor window recesses that intermittently pierce the *qibla* wall. These arcuated patterns continue above the dado and in the absence of window recesses they frame and form tympana filled with roundels, like old telephone dials, set against a background of mother-of-pearl arabesque. This rich ensemble is embellished with a splendid ebony *minbar* inlaid with ivory and mother-of-pearl.



ABOVE: Prayer hall of mosque of al-Mu'ayyad Shaykh.

After al-Mu'ayyad Shaykh, the next effective ruler was al-Ashraf Barsbay (1422–38). He ruled for sixteen years and brought a degree of political stability to Egypt, but in matters of trade his avarice sowed the seeds of Egypt's ultimate economic decline. His military campaigns were principally directed against the Turcoman regions of Mesopotamia and southern Anatolia, and a naval campaign to eradicate piracy in the eastern Mediterranean brought Cyprus within the orbit of the Mamluk empire. Making Cyprus a tributary of the Mamluk empire represented the only territorial expansion during the period of Burji Mamluk rule. Barsbay tightened his political and economic grip on the Hijaz and developed the port of Jeddah in order not only to strengthen trade with India, but also to raise more revenue. As well as dominating the trade routes to India, Barsbay established a number of government monopolies on commodities such as pepper, sugar, paper and wood. Duty charged on these for Europeans in Alexandria became extortionate and it was significant that among the most vocal protesters against these revenues were the kings of Castile and Aragon. Later, when the kingdoms of Castile and Aragon were united by Ferdinand and Isabella, Christopher Columbus was commissioned in 1492 to seek alternative trade routes to India, thus initiating a decisive move to bypass Egypt and the rest of the Muslim world.

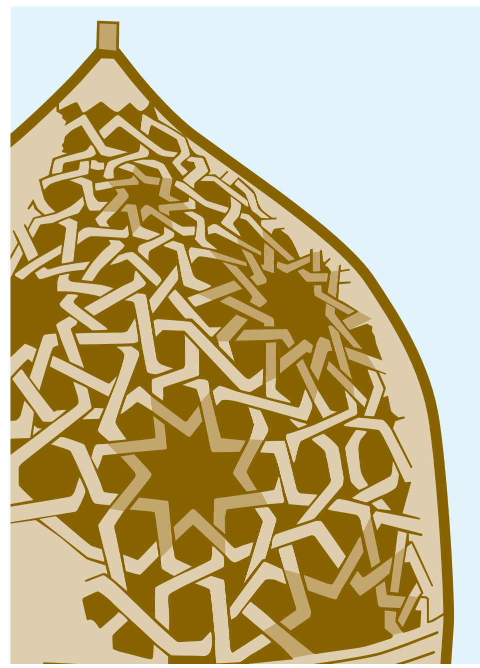
Barsbay, a devout Muslim, was responsible for two *khanqah-madrasa*s: one near the amber market in al-Mu'izz street and the other in the Eastern Cemetery. The *khanqah-madrasa* in al-Mu'izz street, built to accommodate sixty Sufi students, has a cruciform interior similar to Barquq's *madrasa* in the same road. The *tiraz* inscription around the *sahn* is interesting because it gives chapter and verse to the conditions of the *waqf*, thus ensuring that future rulers could not, like al-Mu'ayyad Shaykh, take liberties with such institutions. His other *khanqah-madrasa* in the Eastern Cemetery forms a part of one of the most striking architectural ensembles in Cairo. As well as his own *khanqah-madrasa* complex (1432), this also consists of the tomb of Ganibek al-Ashrafi (1432) and, more recently, the tomb of Amir Qurqumas (1511), which was transferred here from its original location near the mosque of al-Hakim in 1983. What is striking about this group of buildings is the wonderful accumulation of domed mausolea with their extraordinary geometric patterns, which are not just confined to the dome surfaces, but also appear on the cuboid structures that support them with all their varied facets, steps and undulations.

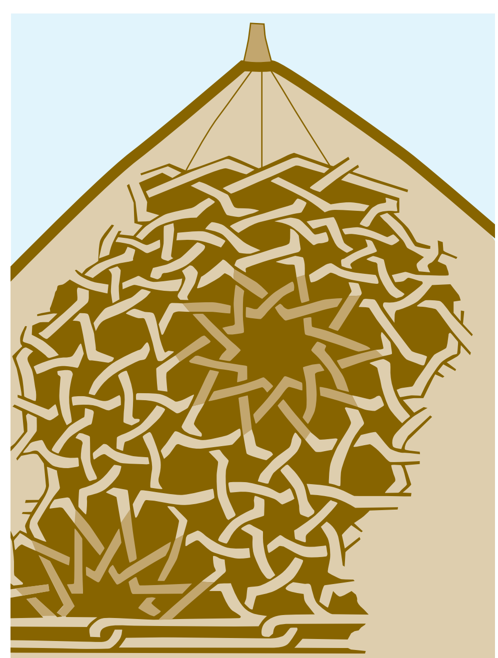


LEFT: The star pattern on the mausoleum of Sultan Barsbay.

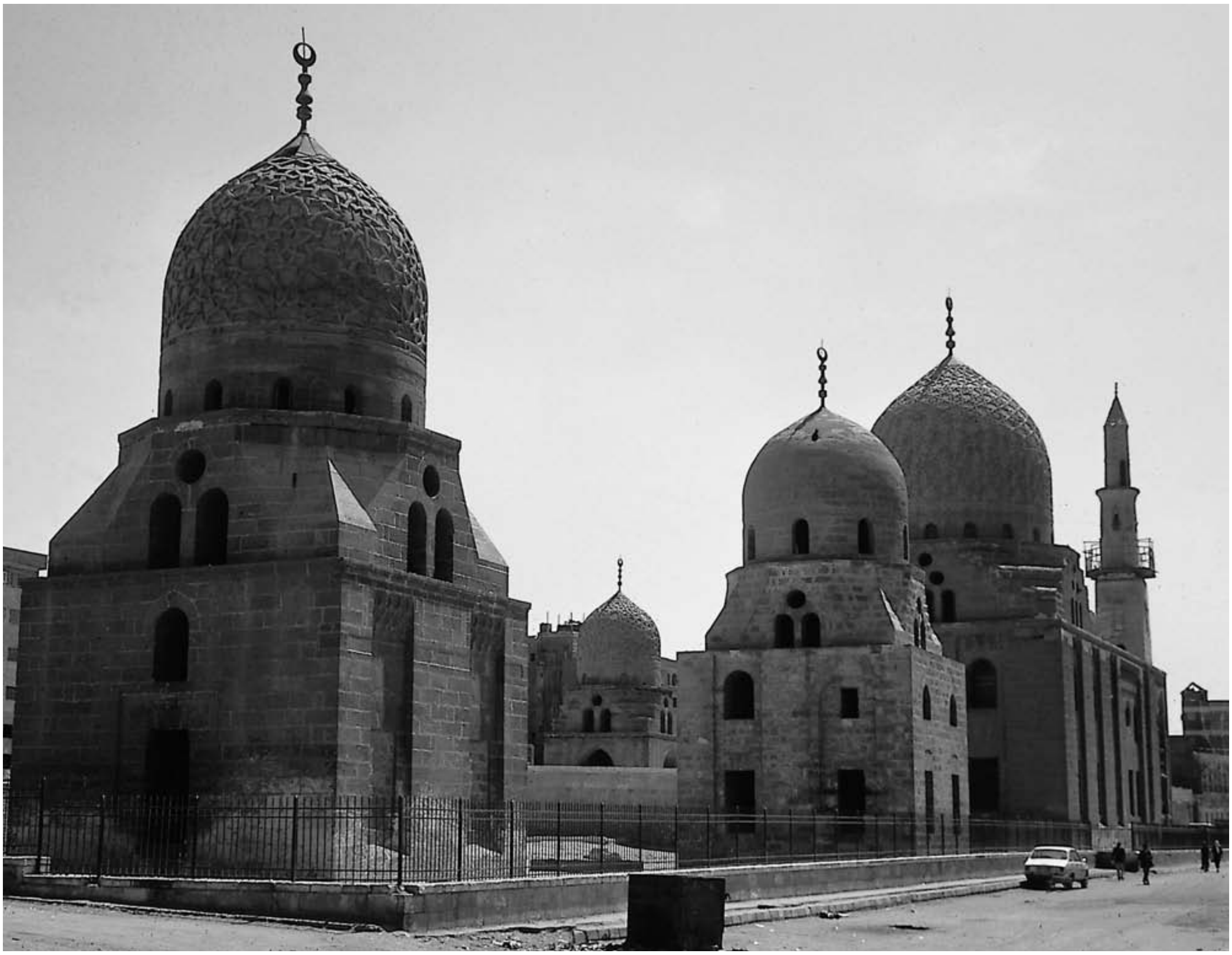
BELOW: The star pattern on a mausoleum built by Sultan Barsbay.

BOTTOM: The star pattern on the mausoleum of Ganibek.





Only three out of the original four domes survive within Barbay's complex, his own mausoleum dome, that on the eastern side built for relatives of the sultan and the free-standing tomb of Ganibek towards the north. All three domes display the geometric ingenuity typical of later Burji dome construction (the recently reconstructed tomb of Qurqumas is without any dome decoration). According to Behrens-Abouseif's analysis, the larger mausoleum dome of Barsbay is divided into three zones as the geometrical pattern progresses from rows of eight-pointed stars at the bottom to seven-pointed stars in the middle and six-pointed stars towards its apex. The visual impression is one of a fine net drawn over the surface. The surface pattern on the other domes is more satisfying in its resolution and it works in a more integrated way with the form. From base to apex, the eastern dome displays a sequence of twelve-, eight-, twelve- and seven-pointed stars, while Ganibek's begins with a row of bisected twelve-pointed stars at the base, transforming to a pattern of ten-pointed stars over the rest of the surface.[8]



ABOVE: *Khanqah-madrasa* complex of Barsbay (right) with mausolea of Ganibek al-Ashrafi (left) and Amir Qurqumas (centre).

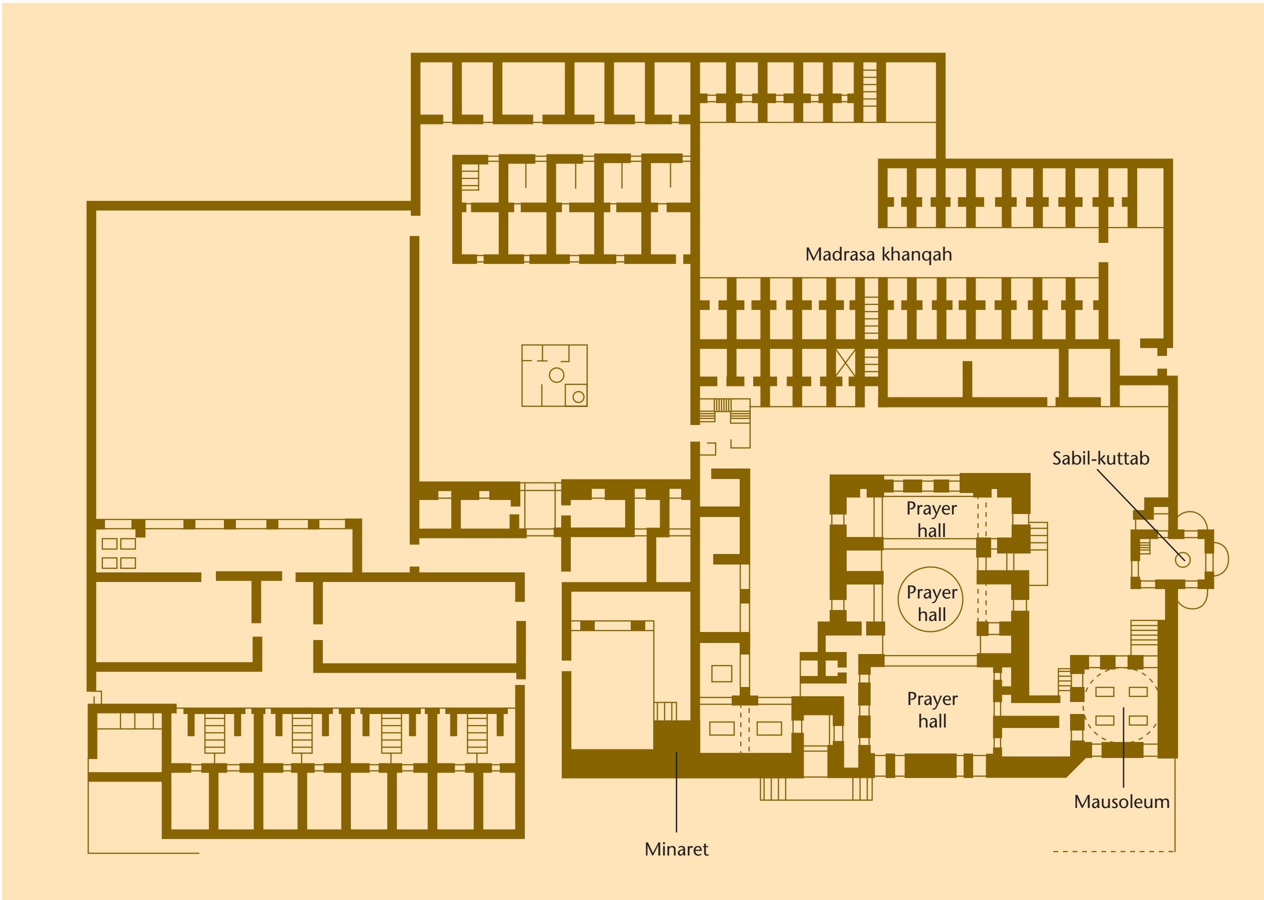
The mausoleum of Ganibek is a domed cube, with sides relieved by long vertical recesses with square *muqarnas* heads. The zone of transition on each side is pierced by paired round-headed windows each surmounted by an oculus, and the corners are sharply articulated by the crystalline triangulation formed by interconnected slanting planes. The long façade of Barsbay's *khanqah-madrasa* is similarly divided by a series of square-headed recesses, but these are pierced with rectangular window grilles on the ground floor and round-headed windows on the second. The mausoleum dome, balanced at the other end by an insubstantial Ottoman minaret, dominates the northern end of the building. It differs from the other domes in having a scrolled zone of transition. The smaller mausoleum dome on the eastern side of the complex has a stepped zone and is an open structure, pierced at ground level on three sides by large pointed arches. The deployment

of these buildings in space, the balance of solid and void and the manipulation of geometrical shapes in terms of both surface and mass make this one of the most satisfying architectural groupings in Cairo.

A double flight of steps leads up to the portal of the *khanqah-madrasa*, which is crowned with a trilobed *muqarnas* hood. This opens into a small vestibule to the left of which is the prayer hall. It is well lit with several windows piercing the *qibla* and opposite wall. The interior is unusual, consisting of a rectangular hall divided into three aisles by arcades running parallel to the *qibla* wall. They support a painted ceiling and recycled polychrome marble adorns the floor as well as the dado. The original *mihrab* has disappeared, but a fine wooden *minbar* (1451) made for the mosque of al-Ghamri has survived. The decorative scheme of the mausoleum is similar to the prayer hall but here the original *mihrab* is preserved, displaying a fine mosaic of interlocking polychrome patterns inlaid with mother-of-pearl. The cenotaph of Barsbay is placed immediately in front of the *mihrab*. A gilded frieze of calligraphy adorns both mausoleum and mosque, and the jewel-like intensity of the stained glass windows adds an unexpected opulence to both interiors.

The ruined buildings to the south of the *khanqah-madrasa* once contained two-storeyed apartment accommodation for Sufis and their families. The Barsbay complex also included a *zawiya* on the opposite side of the road. This smaller institution provided accommodation for Sufis, but more specifically for those of the Rifa'i order. Behrens-Abouseif makes the point that *khanqah*s were generally independent of particular Sufi orders, while *zawiya*s served communities dedicated to one sheikh and the associated *tariqa*.[9] The difficulties of attributing specific orders to the *khanqah-madrasa*s of Cairo is commented on by Michael Rogers, who suggests that it might have been government policy to deny them security of tenure.[10] The orders themselves were changing and the family accommodation provided for them in the buildings next to Barsbay's *khanqah-madrasa* might be indicative of a move towards a looser organization of the Sufis at this time, which permitted marriage and a more secular way of life.[11]

The spread of Sufi accommodation represents a significant trend in the development of the Eastern Cemetery. It was never, to use that European description, a 'city of the dead', but a thriving community of students, Sufis, pilgrims and visitors. This is shown clearly in the generous residential accommodation provided by the two religious-funerary complexes of Sultan al-Ashraf Inal (1451–6)





TOP: Plan of funerary complex of Sultan al-Ashraf Inal.
ABOVE: Funerary complex of Sultan al-Ashraf Inal, before 1875.

and Amir Qurqumas (1506/7) which join together at the northern end of the Cemetery. They form a long, irregular, free-standing architectural ensemble that can be viewed at some distance, allowing the spectator to appreciate the pleasing shapes of their masses. In plan and elevation there is an irregular string of cuboid forms consisting of the imposing bulk of two *madrasa*s joined by long, lower-slung residential units. The horizontal sweep of this composition is offset by the majestic thrust of the slender minarets and the elegance of the mausoleum domes, patterned with lozenges and chevrons and seated on scrolled and angled zones of transition.

Sultan Inal's mosque was begun when he was an amir and completed when he became sultan. On the south-eastern side the façade of the tall central *madrasa* is flanked by the minaret and mausoleum. They are set apart from the *madrasa* and spring, not from the roof-line, but from much lower bases, suggesting that they were completed at an earlier stage in the building programme.

The mausoleum forms an independent structure on the eastern corner and the north-eastern façade shows the remains of a *sabil-kuttab* and the ruins of an extensive *khanqah* built in 1454. The minaret, placed well to the left of the *madrasa*, appears almost as a free-standing entity. It rises from a square-sectioned base, and has three richly carved shafts separated by two balconies, one octagonal and two cylindrical, crowned with a bulbous finial. The first section is decorated with moulding and keel-arched niches and the second has flanges with chevrons zigzagging vertically up the shaft. A similar chevron pattern, this time forming horizontal courses, adorns the dome of the mausoleum.

The façade of the *madrasa* is divided vertically by two recesses pierced by windows on two storeys and an imposing portal with a trilobed *muqarnas* hood. The portal leads to a vestibule and central cruciform hall in which the main *qibla* axis dominates. The lateral *iwan*s are subordinate, and this becomes an increasing feature of later Burji Mamluk architecture (in the case of Qa'it Bay's *madrasa*, they are reduced to mere recesses). The interior is now in a ruinous state, but originally the central *sahn* was covered with a timber roof and was not, like other cruciform *madrasa*s, open to the sky. The roofed *sahn* became a feature of late Burji Mamluk *madrasa*s, although earlier examples can be found in Bahri Mamluk architecture such as that of Amir Il Malik al-Jukunder (1319). His was the first *madrasa* to have a roofed *sahn* and it may be significant that al-Jukunder, who became viceroy of Egypt, came from Anatolia. At that time roofed *sahn*s were a feature of Anatolian architecture, although it is likely that their development in Burji architecture derives from domestic rather than Anatolian sources.

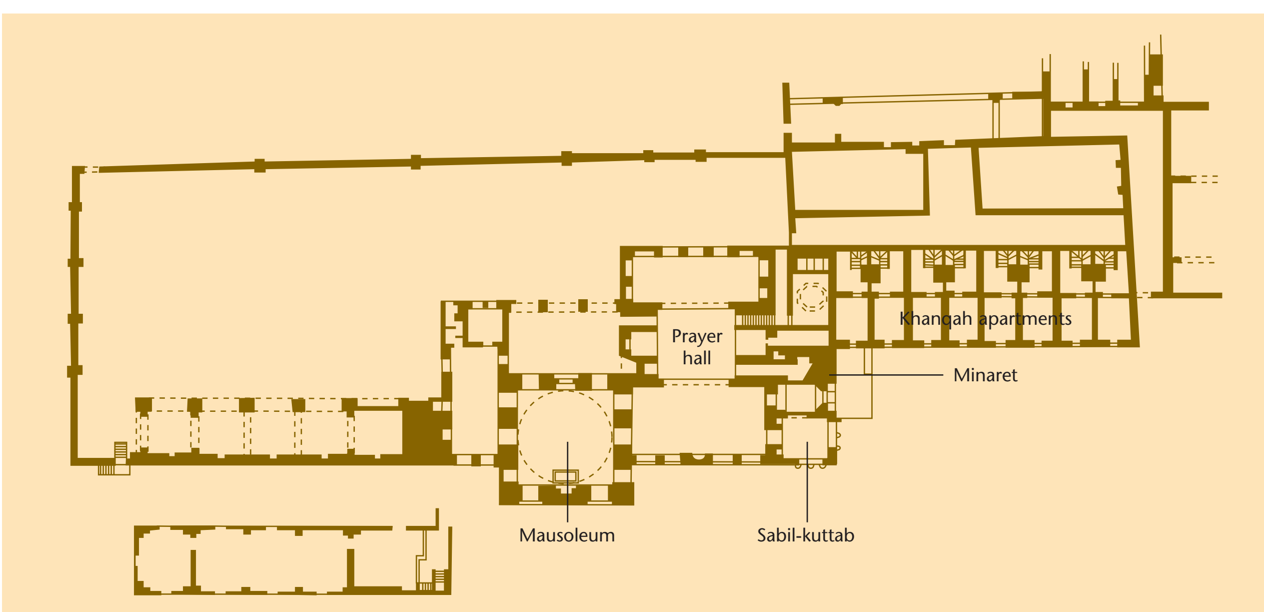
In later Burji architecture the religious domain became more closely integrated into residential units, and in this respect follows the original Islamic practice, set in Persia, of establishing *madrasa*s next to the private quarters of the founding sheikh or patron.[12] In Cairo, Hillenbrand cites an early example of this open-ended relationship between the domestic and religious domain in the small Bahri Mamluk *madrasa* of Amir Mithqal (1361–74). In this building there are no staircases between ground-floor and first-floor accommodation, and it appears that access was only obtainable through the private quarters of the amir.[13] Hillenbrand also quotes the example of the *madrasa* of al-Ghannamiya (1372) near the al-Azhar mosque.[14] In this case the house of the eminent sheikh vizier Shakir ibn al-Ghannam was turned into a *madrasa* by the simple process of adding a *mihrab* and minaret. All these examples

are indicative of the ambiguity, flexibility and pragmatism at the heart of so much Mamluk architecture.

The source for the covered *sahn* is a feature in domestic architecture known as the *qa'a*. This was the main reception hall in a house, usually in the harem and often located on the first floor. It was the loftiest room, roofed with a lantern or dome, and occasionally lit with clerestory windows. It was made up of a sunken central space, known as the *durqa'a*, flanked by two or four *iwan*s furnished with divans and cupboards. One of the best and earliest surviving examples can be seen in the Bashtak palace (1334–9) opposite Barquq's *madrasa* in al-Mu'izz street. This cruciform room on the first floor of the palace is approached by a flight of steps. Its plan consists of two principal *iwan*s on either side of a central *durqa'a* (which once contained a fountain) and two shallow side *iwan*s set behind triple arcades. Each *iwan* has a wooden coffered roof, but the one above the *durqa'a* is set much higher, forming a lantern over the central space. The lantern is pierced with windows under the ceiling, and just above the arcades of the side *iwan*s are galleries of clerestory windows filled with *mashrabiyya*. The placing of side *iwan*s behind a triple arcade is unusual, but a few years later this feature also appeared in the mosque of Aslam al-Silahdar (1344–5) – another early example of a mosque with a roofed cruciform *sahn*.

The *qa'a* was not the only domestic feature to transfer to the religious domain. The *rab'*, or apartment building, was also adapted

BELOW: Plan of funerary complex of Amir Qurqumas.



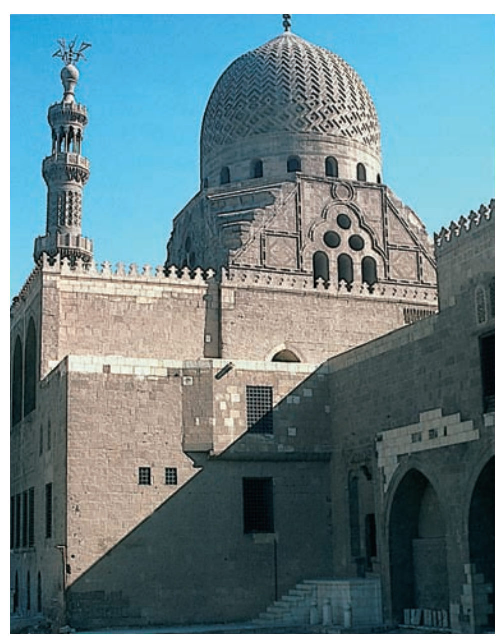
to the residential needs of the Sufis and staff attached to the *khanqah*s of the Eastern Cemetery.[15] It is residential accommodation of this type, built on two floors, that links Sultan Inal's edifice with that of Amir Qurqumas (1506–7). It was the admiration of Qurqumas for Inal's complex that prompted him to build his own tomb and *khanqah* next door. It is much larger than Inal's work and its central plan echoes that of Qa'it Bay. The trilobed *muqarnas* portal is on the north-eastern side and is flanked by the minaret on the right and a *sabil-kuttab* on the left which forms the eastern corner of the complex. The south-eastern façade is impressively proportioned, composed of the *sabil-kuttab*, the prayer hall and the projecting salient of the mausoleum. The minaret is taller than Inal's, with a similar decorative scheme, although the flanges on the second storey are adorned with lozenges, and the third storey is formed by an eight-pillared pavilion. The mausoleum has a scrolled zone of transition and the dome is decorated with lozenges on its lower half and horizontal bands of chevrons covering the upper half.

The accommodation provided by the *khanqah*s of the Eastern Cemetery was not exclusively for Sufis, their staff and families. It was also needed for the patron and other visitors when they visited the saints' tombs on feast days and festivals known as *maulid*s. These celebrated the birthdays and anniversaries of particular saints and drew large numbers of pilgrims to the Eastern Cemetery. In the nineteenth century E. W. Lane in *An Account of the Manners and Customs of the Modern Egyptians* had this to say about the veneration of saints.

> The Egyptians occasionally visit these and other sanctuaries of their saints, either merely with the view of paying honour to the deceased, and performing meritorious acts for the sake of these venerated persons, which they believe will call down a blessing on themselves, or for the purpose of urging some special petition, as for the restoration of health, or the gift of offspring ... The generality of the Muslims regard their deceased saints as intercessors with the Deity; and make votive offerings to them.

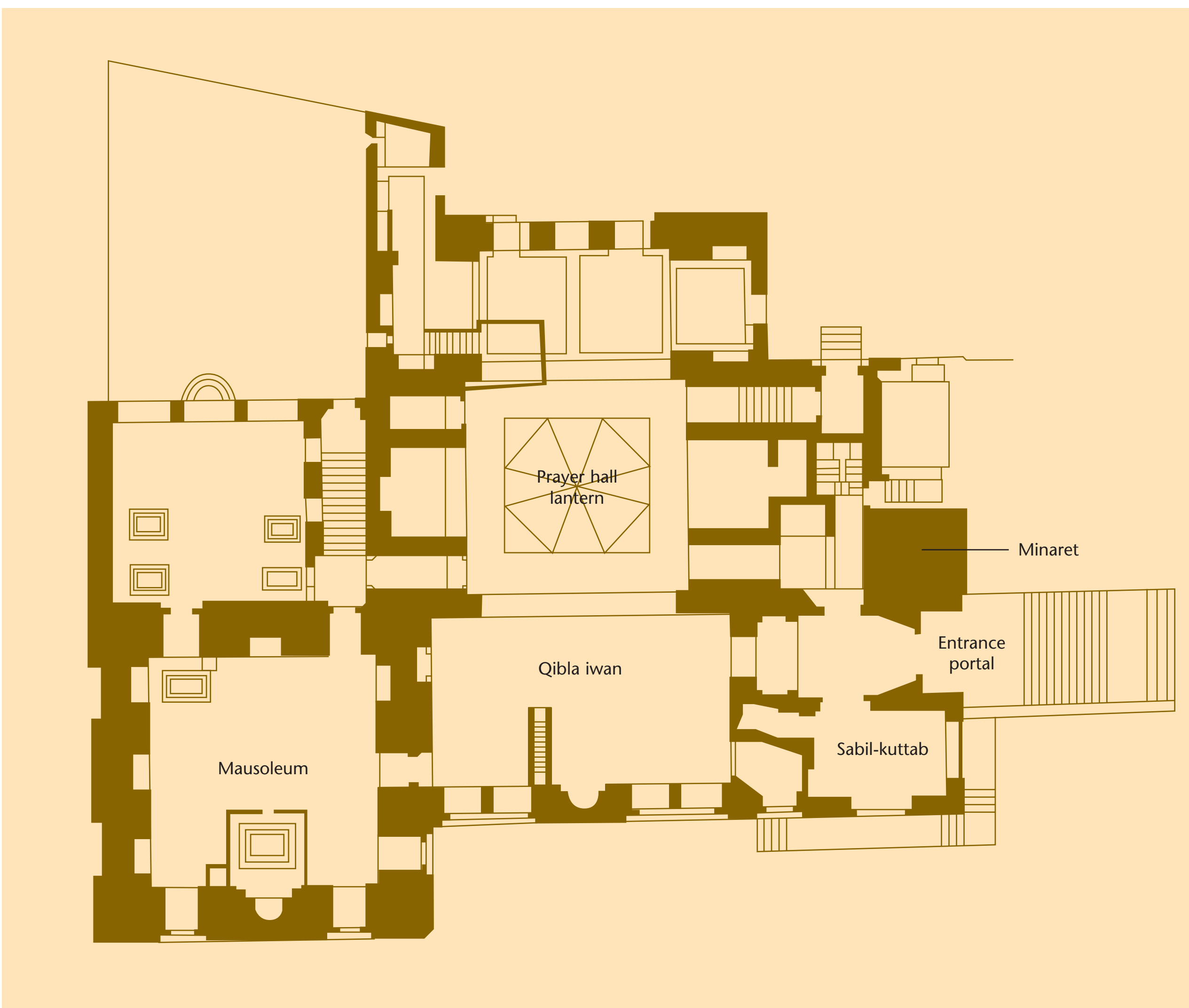
Lane then goes on to describe in some detail the prayers and rituals practised in the tomb – something that can be witnessed today in the mausoleum of Shafi'i. Of the *maulid* festivals he had this to say:

BELOW: The funerary complex of Qurqumas.



On the occasion of such festivals, many persons visit the tombs, both as a duty and as a supposed means of obtaining special blessing; fikees are hired to recite the Kur'an, for the sake of the saint; fakirs often perform zikrs [*dhikr*: repetitious prayers, chants or dances usually performed at Sufi ceremonies]; and the people living in the neighbourhood of the tomb hang lamps before their doors, and devote half the night to such pleasures as those of smoking, sipping coffee, and listening to story tellers at the coffee shops, or to the recitals of the Kur'an, and zikrs ... The festivities often continue for several days.[16]

BELOW: Plan of funerary complex of Qa'it Bay.



Further south in the Eastern Cemetery, in today's more dense residential quarter, is the religious funerary complex of Qa'it Bay (1472–4). This architectural masterpiece was built by Sultan al-Ashraf Qa'it Bay (r. 1468–96). He was the last effective ruler of Mamluk Egypt and a great patron of the arts and architecture, responsible for major building programmes across the empire. Apart from promoting architecture, most of his reign was preoccupied with border disputes with the Ottomans which led to an expensive and inconclusive war. Relations between the Mamluks and the Ottoman empire were further aggravated when Qa'it Bay supported Prince Djem, the brother and rival of the Ottoman Sultan Beyazit II. Djem had mounted an unsuccessful challenge to Beyazit's succession and during his subsequent exile Qa'it Bay gave him shelter in Egypt and supported his attempt to fight back and start a rebellion in Anatolia. All these events caused irreparable damage to Mamluk–Ottoman relations and the cost of the conflict weakened Egypt's economy. Qa'it Bay was forced to raise taxes on trade, and a devastating plague, which claimed up to 12,000 people, further reduced state revenues. His expenditure on architecture did not help matters and his reign ended with an insurrection among the Mamluks that precipitated his abdication and death at the age of over eighty.

Despite the bankruptcy of the country, Qa'it Bay's patronage left Cairo with a number of architectural masterpieces, the most important of which was his funerary complex in the Eastern Cemetery. This is one of the most beautifully proportioned and crafted buildings of the period, and its composition and plan inspired the later work of Qurqumas. Qa'it Bay's funerary complex, like that of Qurqumas, has a portal on the north-eastern side flanked by a minaret on the right and a *sabil-kuttab* on the left. Approached by steps, the tall entrance portal has a trilobed hood with *muqarnas* squinches and a groined vault filled with kaleidoscopic patterns of *ablaq* inlay. The stone is terracotta- and biscuit-coloured, and alternate courses frame the portal and line the returns of the recess. Rising from a square-sectioned base on the right, the minaret is made up of three shafts separated by finely fretted balconies supported on *muqarnas* corbels. The first shaft is octagonal, pierced by four windows and decorated with keel-arched niches with colonnettes and fluted hoods. The second has a strapwork stellar pattern and the third is an eight-columned pavilion crowned with a fretted balcony and bulbous finial.



ABOVE: The entrance portal of funerary complex of Qa'it Bay.

The design of the *sabil-kuttab* displays a finely proportioned balance between solid and void. Its wall surface, enriched by *ablaq*


لجنة الزكاة

masonry and bands of joggled lintels, is pierced by rectangular window grilles in the ground floor *sabil* and the airy arcades of the *kuttab* above. There is a contrast between stone, metal and wood: between the heavy bronze in the lower window grilles and the fragile network of *mashrabiyya* railings in the upper arcades. The whole ensemble is shaded under the cantilevered eaves of the light wooden roof which is gilded and painted inside. The *madrasa* wall between the *sabil-kuttab* and the mausoleum is divided by three square-headed recesses. The first, next to the *sabil-kuttab*, is narrow with two rectangular window grilles. The two broader recesses have an oculus between them and form the external *qibla* wall of the *madrasa*. They are pierced by paired window grilles on the ground floor and paired pointed windows above. The cubic mass of the mausoleum projects from the main body of the complex and takes up the whole of its southern corner. Its bulk, below the dome and zone of transition, is relieved by a central oculus and flanking recesses pierced by pointed windows and rectangular window grilles. The fenestration of the façade, from *sabil-kuttab* to mausoleum, is a masterly piece of proportioning, and the fleur-de-lis crenellation along the roof-line provides a crisp finishing touch.

The exterior of the complex is characterized by its dignified restraint except for the minaret and dome where all the dexterity of the stone carver's art was lavished. Rising from the cube of the mausoleum, the dome is buoyed up on rippling corner scrolls in the zone of transition. The zone is pierced on all four sides by triple windows surmounted by three oculi, and the drum of the dome is ringed by twelve round-headed windows. The inscribed flanking roundels and moulding around the windows and oculi echo the baroque rhythms of the scrolled corners. The dome is covered with magnificent stellar strapwork patterns interlaced with arabesque. Previous domes have displayed only geometrical decoration, but this elaboration of interlaced arabesque marks a significant innovation. This is a complex and original design, which Behrens-Abouseif analyses as follows:

> Instead of basing the pattern on the principle of a star applied on a decreasing, or triangular, base to apex surface, the star was designed for a circular surface, the centre of which is the apex of the dome. Of course, unlike a flat circular area, the dome surface has irregularities. In this case they met with the star pattern not near the apex, but nearer to the base of



ABOVE: The dome.

OPPOSITE PAGE: The funerary complex of Qa'it Bay.

> the dome, where the lines resulting from the central star at the apex have to be logically continued. Thus the design of Qa'it Bay's dome is made from a bird's-eye view: a sixteen-pointed star centred on the apex and covering the upper half of the dome, with lines continued to form a row of seventeen-pointed irregular stars surrounding it and at the base of the dome. To conceal the irregularities resulting here in the middle part of the dome, arabesque patterns fill the whole space filled by the geometric lines.[17]

The cruciform interior of the *madrasa* is of the *qa'a* type with a sunken *durqa'a* at the centre, roofed by an octagonal lantern. Flanking this, and forming the main axis of the *madrasa*, are two *iwan*s of unequal size framed by horseshoe arches. The larger is the prayer hall and the smaller occupies the north-western end of the *madrasa*. Along the sides are lateral *iwan*s of equal height forming tall narrow recesses. In essence this plan is similar to the *qa'a* of the Bashtak palace except in the design of the lateral *iwan*s. In the Bashtak palace the lateral *iwan*s form shallow recesses behind three open arcades, whereas here the tripartite division consists of central *iwan*s flanked by solid narrow walls pierced and decorated with doors, joggled lintels and window grilles. The composition of these walls and *iwan*s recalls the *sahn* façades of earlier mosques, but this interior space differs in its intimacy and opulence, enriched by such features as the ornamental keel-arches radiating with gilded patterns of *muqarnas*. Despite their inequality of size, the four *iwan* arches are boldly articulated with painted *ablaq* voussoirs, and above these the decorative scheme of this central space is crowned with a continuous frieze of gilded Naskhi inscriptions.

This is a very sumptuous interior and the gilded and painted roofing is quite magnificent. The central lantern, set much higher than the *iwan* roofs, contains a stellar pattern of fourteen-sided figures in gilded strapwork. The stellar interlace contains eight coffered arabesque roundels and a circular central medallion filled with calligraphy. The gilded and painted beams in the two main *iwan* roofs contain square and oblong coffers with interlacing stellar patterns and arabesques. The heraldic richness of the roofing is complemented by the subdued tones of the polychrome marble floor beneath, with its interlacing circles and chevron patterns. The *qibla* wall is pierced at floor level by four tall window grilles with the *mihrab* at the centre flanked by a *minbar* on the right. The



marbling in the *mihrab* has been stripped, but the original *minbar* has survived. This is one of the finest of the period and its radiating geometrical forms and inlaid ivory equal in quality those of Qa'it Bay's other *minbar*, now in the Victoria and Albert Museum. Surmounting the *mihrab* and window grille arches is a gilded band of calligraphy, and above this are four brilliant stained glass windows divided by an oculus in the centre. The gem-like intensity of colour in these is echoed in the windows and oculus on the wall opposite in the smaller north-western *iwan*.

ABOVE: The interior of the *madrasa* in the funerary complex of Qa'it Bay.



ABOVE: The *sabil-kuttab* of Qa'it Bay.

The funerary complex of Qa'it Bay demonstrates the continuing capacity of Mamluk architecture to change and adapt in an inventive, open-ended way. It displays yet another composite solution to the multi-purpose complexes that characterize so much of late Mamluk architecture. Besides the mosque, mausoleum and *madrasa*, this building also incorporated an internal reception loggia known as a *maq'ad* (second-storey loggia) – another feature, like the *qa'a*, derived from domestic architecture. The complex also provided accommodation for Sufis and a *rab'* built over the storerooms of a *waqala* (urban caravansarai).[18] The *sabil-kuttab* forms a significant part of the design and these structures now become a distinct feature in Mamluk architecture. Their popularity continued well into the Ottoman period when they frequently appeared in free-standing form, contributing enormously to the character of Cairo's urban landscape.

It was Qa'it Bay who was responsible for the first free-standing *sabil-kuttab* in Cairo, built in 1479 and located in Saliba street between Ibn Tulun's mosque and the Citadel. The composition of the building, with its tall trilobed portal, loosely resembles the northern section of his funerary complex, but its decoration is much more elaborate. The façade is covered with *ablaq* masonry, polychrome patterns of marble and ceramics, joggled voussoirs, medallions, interlacing arabesques, geometrical shapes and inscriptions. As in the funerary complex, two large ground-floor window grilles form key base elements in the fenestration, with the rest consisting of smaller, narrow uprights, banded across three storeys on the northern façade and flanking the portal on the western side. The wooden structure of the restored *kuttab*, with its cantilevered roofs and projecting balconies, has a much higher profile than that of the funerary complex. Supported on wooden brackets, the *kuttab* balconies express an airy fragility in their light slender columns, fretted woodwork and *mashrabiyya* lattices. The reticulated patterns in the woodwork echo in a lighter key the darker, heavier tones of the bronze window grilles below.

Surmounting each of the large *sabil* window grilles are nine panels containing polychrome patterns of inlaid marble and ceramics. The first panel forms a lintel decorated with interlacing arabesques picked out in white, terracotta-red and dark blue. Above this is a lintel with black and white joggled voussoirs shaped like branches with trefoil leaves. They give an illusion of concavity, breaking the surface of the lintel, but two-dimensional order is restored by the surface tension in the geometrical forms of the smaller side panels. The three panels above this lintel contain

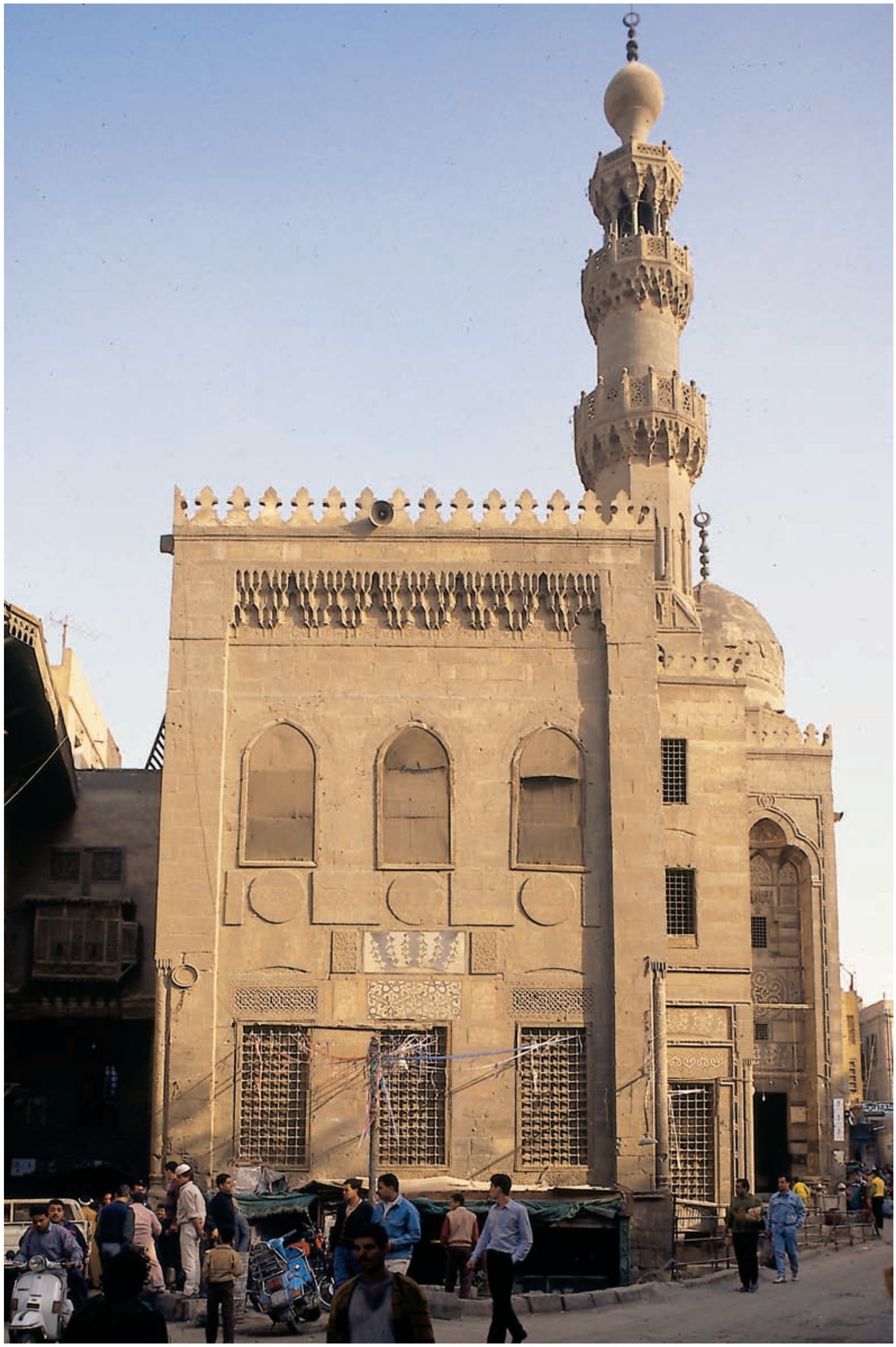
roundels. The largest in the centre encircles a bronze oculus grille with interlacing arabesques drawn in terracotta-red and white over a buff stone background. The flanking roundels contain geometric interlaces against a dark blue background, reinforcing a scheme in which organic patterns at the centre are contained by the geometrical forms of the margins. The composition is rounded off with a surmounting band of calligraphy which wraps around the building and articulates the horizontal division between the *sabil* and *kuttab*. As Blair and Bloom have pointed out, this elegant format of arabesque, geometrical forms and calligraphy derives from contemporary book illumination.[19]

The richness of Qa'it Bay's architecture has already been observed in his minaret adorning the al-Azhar mosque. Other works include his *madrasa* at Qal'at al-Kabs (1475) and two *waqalas*, one opposite the al-Azhar mosque (1477) and the other near Bab al-Nasr (1480). Outside Cairo his other important monuments include the fortress in Alexandria, occupying the site where the Pharos once stood, and perhaps more significantly, a number of *madrasas* in the holy cities of Jerusalem, Mecca and Medina. In Jerusalem on the Haram al-Sharif (Noble Sanctuary) is his *sabil*, a domed cube similar in form to the free-standing mausoleum of Ganibek al-Ashrafi in Cairo's Eastern Cemetery. Its crystalline form makes a notable contribution alongside a cluster of domed octagonal buildings that form satellites around the Dome of the Rock. The arabesques on the *sabil* dome are a provincial variant on those adorning the dome of his funerary complex in Cairo. Nearby, at the western edge of the Sanctuary, is the Ashrafiya *madrasa* (1482), the most important of a number of *madrasas* Qa'it Bay established in the holy cities. These buildings defiantly signalled Egypt's imperial role as guardian of the holy places at a time when the advancing Ottoman empire was poised to extinguish her power in the region. The Ashrafiya *madrasa*, which adjoins the earlier Baladiya *madrasa*, is the most imposing of a number of *madrasas* built near the Haram al-Sharif. Only the ground floor survives, but the *madrasa* itself was of the *qa'a* type, constructed laterally on the first floor over an assembly hall. The imposing façade, with its triple arcaded loggia, overlooked the Sanctuary, and the surviving first-floor structure, with its *ablaq* masonry, vaulted entrance porch and vestibule, is equal in strength and originality to anything Qa'it Bay built in Egypt.

Back in Cairo, one of the most beautiful mosques of the Qa'it Bay period is that erected by his amir, Qijmas al-Ishaqi (1478–9). It is built on the triangular intersection of two streets, Sharia Darb



ABOVE: Qa'it Bay's *sabil* on the Haram al-Sharif, Jerusalem.

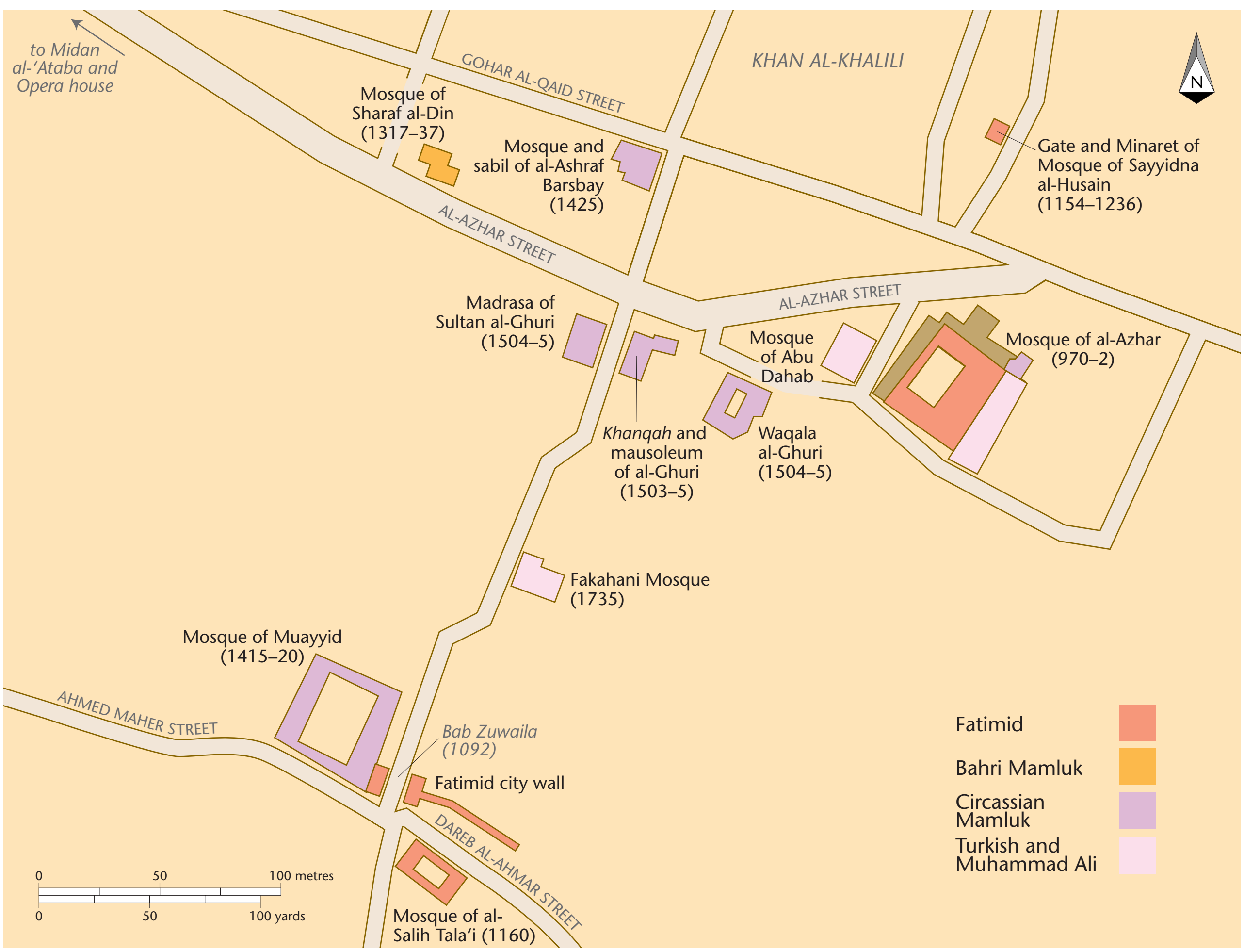


ABOVE: Mosque of Qijmas al-Ishaqi.

al-Ahmar and Sharia Abu Huraybah, near the Bab Zuwaila. Because of the cramped nature of the site, there is a separate *sabil-kuttab* across the street and an elevated passage linking the mosque, via a bridge, to the ablution court. Amir Qijmas was a distinguished man who became viceroy of Damascus and his many offices of state are blazoned on the window grilles of the *sabil*.[20] This beautifully proportioned mosque is built over a number of shops, now below street level, and its stepped façades are eye-catching in their use of *ablaq* masonry. The joggled lintels, heart-shaped arabesques, roundels and contrasting patterns of *ablaq* masonry recall those on Qa'it Bay's *sabil-kuttab*, but here the decoration is confined to the façades, and unlike other buildings of the period the dome and minaret are relatively plain.

The interior is of the *qa'a* type and the main axis consists of three spatial units, the *qibla iwan*, *sahn* and north-west *iwan*, which

BELOW: Ghuria district of Cairo.





ABOVE: The mausoleum and *khanqah* of Sultan al-Ghuri.

diminish in size in that order. The *qibla iwan* forms a lateral rectangle whereas the *sahn* and north-west *iwan* are both square. Like Qa'it Bay's funerary complex, the lateral *iwan*s form shallow recesses, the principal *iwan*s are framed by horseshoe arches and the central *sahn* is covered with a gilded octagonal lantern. This is a gem of an interior with extensive stained glass and rich panelling in the doors with gilded calligraphy above. The polychrome marble in the floor is echoed in the black, white and brown dado panelling. A gilded frieze of calligraphy runs around the prayer hall and the *mihrab*, lined with white marble, is cut with shallow, scrolling arabesques, surmounted by an elegant band of Kufic. The hood is enlivened with touches of blue faience, and joggled voussoirs radiate around the arch. The most important feature in the interior is the inlaid wooden *minbar*, which matches in quality those of Qa'it Bay. Because of the increasing cost of ivory, bone was now being used as a substitute, and the material is manipulated with greater relief, using bosses to punctuate the radial designs.[21]

The Mamluk factions that precipitated Qa'it Bay's abdication and death continued their feuding during the following reigns of al-Nasir Muhammad IV (1496–8), Qansuh I (1498–1500), Janbalat (1500–1) and Tuman Bay I (1501). All were Mamluk puppets and none reigned for more than two years. It was Sultan al-Ghuri's strength of character that finally restored stability when he came to the throne at the age of sixty in 1501. The country was bankrupt and he took draconian measures to replenish the treasury through high levels of taxation. This did little to address Egypt's weakening economy but it allowed al-Ghuri to spend money on a number of major public works including his *madrasa*, *khanqah* and *waqala* in the area now named after him, the Ghuriya. The *madrasa* and *khanqah* (1503/4) are two imposing structures facing each other at the point where al-Mu'izz street is crossed by Sharia al-Azhar. They make a splendid visual climax to the end of this section of the street, and the picturesque cluster of shops and small stalls around their stepped entrances have long made them an attractive subject for painters such as David Roberts and John Frederick Lewis.

The *khanqah* is on the east side of al-Mu'izz street and its northern corner is made up of a handsome *sabil-kuttab* with three sides projecting into the street. Next to this, steps lead up to a trilobed portal that gives access to a square vestibule, lit by a wooden lantern, leading to the mausoleum on the right and the *khanqah* on the left. The mausoleum was originally covered by a huge dome lined on the outside with green tiles, but this was structurally too ambitious and soon had to be reconstructed. It was subsequently twice rebuilt, and according to Behrens-Abouseif, the last dome, made of brick, fell at the beginning of the twentieth century.[22] The mausoleum is now covered with a wooden roof. The tomb contains the bodies of al-Ghuri's son, daughters and his concubine, and ill-fated successor, Tuman Bay II. Sadly, al-Ghuri is not buried here but died on the battlefield in Syria. As the historian Ibn Iyas (1448–c. 1524) wrote, 'How amazing that al-Ghuri is not buried at the *madrasa* on which he spent 100,000 dinars imagining that he would be interred in a magnificent tomb, but otherwise was destined to lay stretched out in the wilderness the prey of wolves and leopards.'[23] The *khanqah* is a large assembly hall with a *mihrab* built for Sufi meetings. No residential accommodation was provided and today this impressive space is used for cultural events such as the performance of 'Sufi' music and dancing.

The mosque and *madrasa* opposite are dominated by the minaret, the second tallest in Cairo, made up of four rectangular



ABOVE: The *waqala* of Sultan al-Ghuri.

shafts and crowned with five bulbous finials. This square-sectioned plan is something of an innovation and a similar minaret, built at the same time (1503), adorns the funerary complex of Amir Qanibay al-Rammah. According to Henri Stierlin, these minarets may be the result of Syrian influence due to the presence in Cairo of Syrian stonemasons seeking refuge from a possible Ottoman invasion.[24] The interior of the prayer hall is of the *qa'a* type, much larger than that of Qa'it Bay's funerary complex, and the plan is conceptually similar to that of the mosque of Qijmas al-Ishaqi. Here, however, the *qibla iwan* is proportionately much larger in its lateral spread, and larger than the *sahn* and north-western *iwan* put together. It forms a discrete space and the lateral wall that frames it with a large pointed horseshoe arch almost screens it off from the rest of the mosque. Horseshoe arches frame the other *iwan*s, and the decorative black and white marble panelling in the dado and the stone carving on the walls provide an elaborate interior, but the craftsmanship is much coarser than that of al-Ghuri's predecessors.

Despite their lack of refinement, there is a confidence and boldness of scale to al-Ghuri's buildings. The same spirit is reflected nearby in his *waqala* and *rab'* – the best preserved in Cairo (1504–5). This building forms an impressive cubic mass overlooking Sharia Muhammad Abdhu, the narrow road linking the mosque of al-Azhar with al-Ghuri's *khanqah* and *madrasa*. The imposing façade is broken by a central trilobed portal with a groin-vaulted hood and *muqarnas* squinches. It is flanked by elegantly proportioned rows of shuttered windows, iron grilles and *mashrabiyya*s belonging to the *rab'* on the upper floors. It leads into a central court surrounded by arcades with pointed arches springing from octagonal piers built of *ablaq* masonry. Behind these are two storeys of rooms providing storage space on the ground floor and accommodation for merchants on the second. A *mashrabiyya* balcony above the first floor forms a continuous horizontal band across the arcade just above the piers. The walls above the arcades consist of *ablaq* masonry pierced by horizontal rows of upright windows. Those on the fourth floor consist of iron grilles set flush to the wall, but the shutters beneath with their angled flaps (when open), and the strong cuboid projections of the *mashrabiyya* windows above, push the surface into relief in plane and solid form.

Steps lead up from the ground floor to the apartments of the *rab'*. These form triplex units unlike the more common duplexes seen in other *waqala*s such as those of Qa'it Bay. Normally the

lower floors contained latrines, niches for water jugs and a reception hall, while the upper floors provided sleeping accommodation and private roof space.[25] Edward William Lane's observations of *rabs* in the nineteenth century describe them as follows:

> These lodgings are separate from each other, as well as from the shops below, and let to families who cannot afford to rent a whole house. Each lodging in a *rab'* comprises one or two sitting and sleeping rooms, and generally a kitchen and latrine. It seldom has a separate entrance from the street; one entrance and one staircase usually admitting to a range of several lodgings ... They are never let ready-furnished; and it is very seldom that a person who has not a wife nor a female slave is allowed to reside in them, or in any private house: such a person (unless he have parents or other relations to dwell with) is usually obliged to take up residence in a *wakala*, which is a building chiefly designed for the reception of merchants and their goods.[26]



ABOVE: The *waqala* of Sultan al-Ghuri.

According to Behrens-Abouseif there were usually no kitchens in these apartments and people generally relied on take-away food because the cost of cooking fuel was so expensive.[27] Take-away food was a part of the street life of Cairo, sold in the shops and by itinerant street vendors. Behrens-Abouseif's point is endorsed by E. W. Lane, who observed: 'There are many cooks' shops where kebab and various other dishes are cooked and sold; but it is seldom that persons eat in these shops, generally sending to them for provisions when they cannot conveniently prepare food in their own houses.'[28]

Apart from his own *madrasa*, *khanqah* and *waqala*, al-Ghuri spent public money improving the infrastructure of the country, strengthening the fortifications of Alexandria and Cairo, digging wells, cutting canals and building roads, bridges and aqueducts. He maintained a lavish court and spent money purchasing Mamluks, but in so doing he failed to modernize his army. His reign was initially peaceful but he then faced the two external threats that ultimately destroyed the Mamluk Empire. The first was from the Portuguese, whose voyages of discovery, opening up direct sea routes to India, gradually undermined Egypt's trading position. Portuguese shipping now dominated Eastern waters, attacking and

harassing Egyptian and other Muslim ships trading from the Arabian Gulf. A number of Muslim rulers called upon Egypt for help, but when diplomatic moves failed, al-Ghuri rebuilt his fleet and successfully defeated the Portuguese in 1512 off Chaul, near Bombay. This victory was, however, short-lived, and the following year the Portuguese successfully attacked the Egyptians at the island of Dui in the Gulf of Cambay (India). The assault on Muslim shipping continued and the Portuguese penetrated as far as the Arabian Gulf and Aden, effectively destroying Egypt's lucrative monopoly of the spice trade.[29]

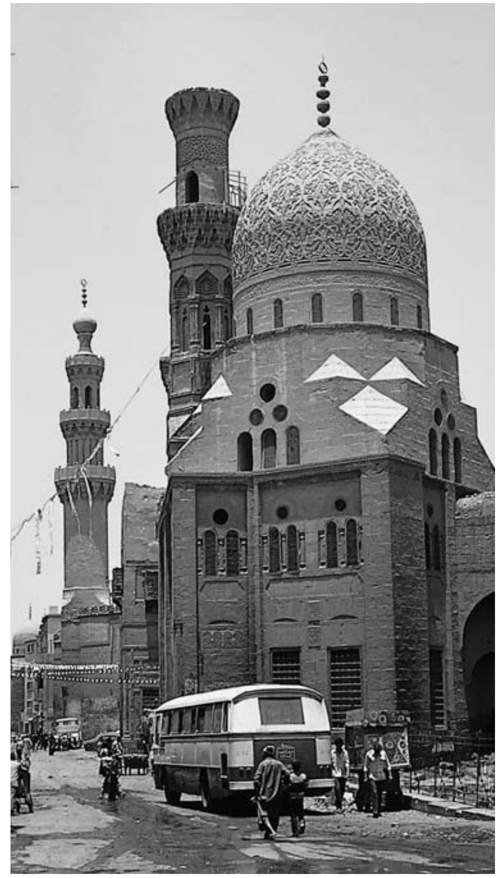
The turning point in Egypt's relations with the Ottoman Empire occurred when Selim succeeded to the throne. Border disputes had for years made their relationship volatile, but matters worsened when the Ottomans became embroiled in a war with Safavid Persia. Shah Ismail was in the process of forging a new Shi'ite state and this involved a number of incursions into Ottoman territory where he had a following of Shi'ite Turks. Selim regarded the new Persian state as a major threat, not just to the Ottoman empire but to Sunni Islam as a whole, and he responded by first persecuting the Shi'ites in eastern Anatolia and then moving against Ismail. In 1514 Selim used his superior firearms to defeat the Persians at the battle of Chaldiran in north-western Azerbaijan. Later, in 1516, Selim moved south and massed his troops on the Syrian border where he occupied disputed Mamluk territory. His claim that these actions were aimed at Persia rather than Egypt was not accepted by al-Ghuri who immediately led his army north to Aleppo. The two armies met at the battle of Marj Dabiq and again Ottoman firearms proved decisive in the field of battle. The Mamluk cavalry, with its medieval codes of chivalry, was outmatched by Selim's field artillery and muskets. The Mamluk army was destroyed and in the course of the battle al-Ghuri, aged over seventy, died of a seizure.

In Cairo, the viceroy, Tuman Bay, was proclaimed sultan, but he was powerless to resist the Ottoman advance on Egypt. In 1517 the Mamluks suffered another major defeat at Raydaniyya, near Cairo, and Selim sent an ultimatum to Cairo offering Tuman Bay the position of viceroy on condition that Selim be recognized as sultan of Egypt. Tuman Bay refused and in response Selim entered Cairo. Tuman Bay was hanged at the Bab Zuwaila and the caliph, al-Mutawakkil III, was taken prisoner and sent to Istanbul. Later, al-Mutawakkil III returned to Egypt and on his death, in 1538, the title of caliph passed on to Süleyman the Magnificent and his suc-

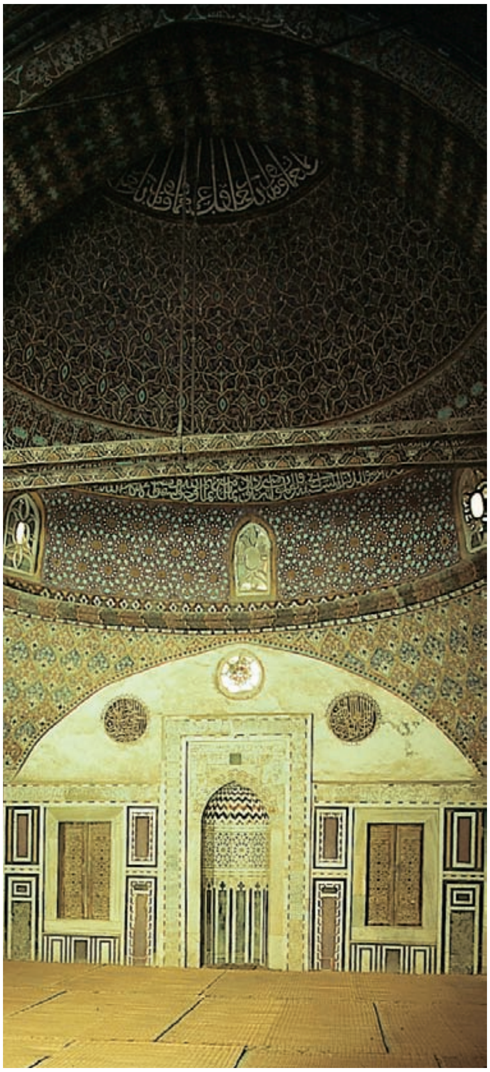
cessors. Egypt then became a province of the Ottoman empire ruled by Turkish pashas, but the power of the Mamluks remained considerable. Many pashas in their turn, like the sultans before them, became puppets of the Mamluks, and during the latter part of the eighteenth century Egypt's independence was more or less re-established under Mamluk rule. It was not until the reign of Muhammad Ali (1805–48) that Mamluk power was finally obliterated.

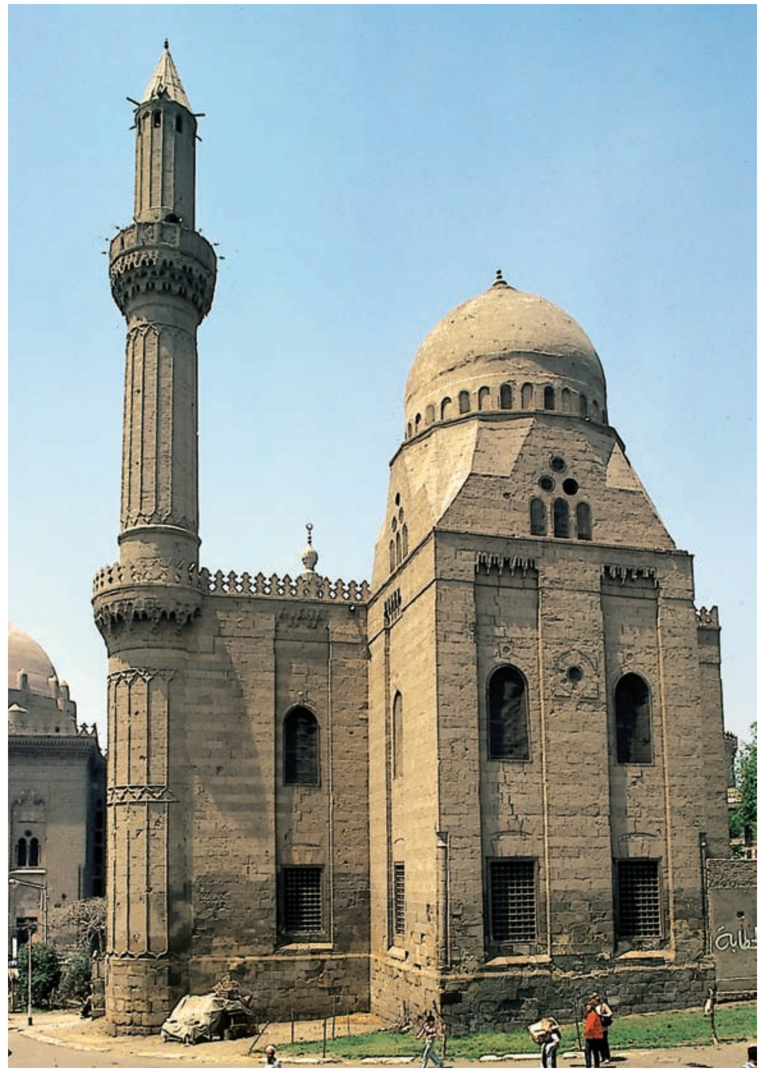
The Ottoman conquest did not bring an immediate end to Mamluk architecture, and one of the finest buildings of the period is the mosque of Amir Khayrbrak (1520–1) in Sharia Bab al-Wazir, near the Citadel. Amir Khayrbak, governor of Aleppo, gained much diplomatic experience of the Ottoman court during his distinguished career. At the battle of Marj Dabiq, al-Ghuri put him in command of the left wing of the army, but during a decisive moment in the battle he defected to Selim. As a reward for this treachery Selim appointed him governor of Egypt, where he adopted Ottoman dress, language and culture.[30] He did not, however, adopt an Ottoman style for his mosque and it stands as one of the most distinctive late Mamluk buildings in the city. This is due to the rich decoration on the dome and minaret as well as its irregular plan and vaulted prayer hall. The dome, with its fine interlacing arabesque, matches in quality the works of Qa'it Bay. Equally rich is the minaret rising from a square base with two shafts, one octagonal and one cylindrical (the third, in the form of a pavilion, was removed). The octagonal shaft is decorated with keel-arched recesses and the cylindrical shaft, built of brick, is covered with geometric stucco patterns. Two balconies supported on a lush outgrowth of *muqarnas* separate and crown the two shafts.

The irregular plan of the mausoleum makes a striking impact as one approaches the building up Sharia Bab al-Wazir. The sharp, flange-like angles of the walls are echoed in the triangulation of the slanting planes that form the corner sections of the zone of transition. The design is compact and crystalline and the interlacing arabesques on the dome make a fitting climax to this mounting ensemble of prismatic forms. The mausoleum is attached by means of an arch to the adjacent palace of Amir Alin Aq, a thirteenth-century building which Khayrbrak refurbished and occupied. Such an arrangement, linking a funerary monument to a palace, is quite unusual. The north-western side of the mosque is taken up by a *sabil-kuttab*, and the trilobed entrance portal opens into a court



ABOVE: The *madrasa* and mausoleum of Amir Khayrbak.





ABOVE: Interior of the mosque of Süleyman Pasha.

ABOVE RIGHT: Mosque of Mahmud Pasha.

with a door on the right leading to the mosque. The prayer hall, made up of three cross-vaulted bays, is unique and departs from the normal *qa'a* plan. The vaults are constructed with alternating courses of terracotta- and biscuit-coloured *ablaq* masonry and there is an octagonal lantern in the central bay. It has been suggested that a wooden roof was originally intended, but an acute shortage of timber made it necessary to change course and build stone cross-vaults.[31] A change in direction is indicated by the way the supporting arches obscure the windows above the *mihrab,* suggesting that the *qibla* wall was built first and the cross-vaults added somewhat insensitively later. These vaults may also be explained by Syrian influence, bearing in mind the fact that Amir Khayrbak spent much of his time in Aleppo.

The use of terracotta- and biscuit-coloured *ablaq* masonry is characteristic of a number of late Mamluk buildings, giving them an attractive warmth, particularly in the late afternoon light. It can be seen in the funerary complex of Amir Qanibay al-Rammah (1503) and the mosque of Mahmud Pasha (1567), a free-standing building in the Maydan Rumayla, between the foot of the Citadel and Sultan Hasan's mosque. The Mahmud Pasha mosque is Mamluk in style except for the minaret, which is typically Ottoman with its conical top and slender, pencil-like form. Despite the lack of polychrome marble, the interior of this lantern-lit mosque resonates with warmth and colour. The warm tone is set by horizontal courses of *ablaq* masonry and pink granite Pharaonic columns, but the lustre and brilliance is provided by the stained glass windows set in stucco and the gilded and painted arabesques in the roof. Discounting later revivals, such as the mosque of Shaykh al-Burdayni (1616–19), this was among the last of the Mamluk-style mosques. Thereafter the ruling Turkish pashas generally commissioned Ottoman-style buildings.

Postscript

Cairo ceased to be an imperial city and its architecture under the Ottomans reflected its provincial status. Without royal patronage no architecture of the previous magnificence and scale could be realized. There are one or two Ottoman buildings in Cairo that equal those in Istanbul, such as the Süleyman Pasha mosque on the Citadel (1543), but these are exceptions to the rule. Others, like the mosque of Yusuf Agha al-Hin (1625), are not without charm, but more ambitious works, such as the Sinan Pasha mosque at Bulak (1571) and the mosque of Muhammad Bey Abu'l Dhahab near al-Azhar (1774), are clumsy by comparison. Rather than mosques, the most attractive legacy of the Ottoman period can be found in houses, palaces and *sabil-kuttab*s, like the Gayer Anderson house near Ibn Tulun's mosque and Katkhuda's *sabil-kuttab* in al-Mu'izz street. It was not, however, until the age of Muhammad Ali that Egypt was in any position to build anything approaching the imperial splendour of previous ages. When it did, the result was a visual catastrophe.

It was Muhammad Ali, acting as Egypt's governor, who filled the power vacuum left by Napoleon's departure in 1801. Egypt was still nominally a province of the Ottoman empire, but the empire was now a spent force and in reality Muhammad Ali was free to do as he pleased. He not only reclaimed Egypt's independence, but also



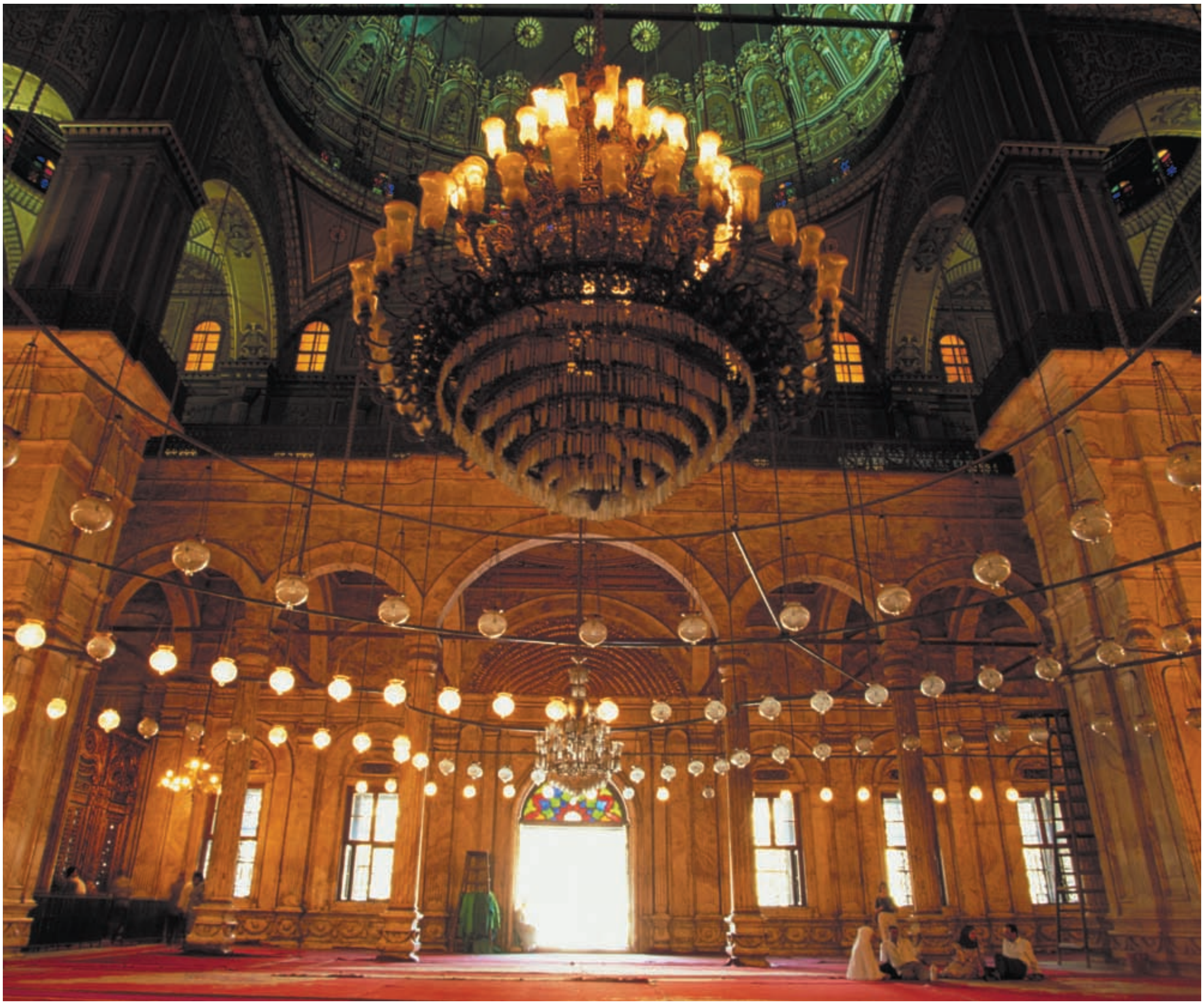
ABOVE: *Sabil-kuttab* of Abdul Rahman Katkhuda.



carved out for himself a sizeable chunk of the Ottoman empire, including Syria. His imperial ambitions were eventually thwarted by the British, who in 1840 supported the Ottomans and forced a return to the status quo. They did, however, allow him and his family the hereditary right to rule Egypt. He radically modernized the country and courted the West in order, among other things, to gain access to European technology. Muhammad Ali's principal architectural contribution to Cairo was the rebuilding of the Citadel, where he reinforced the walls and built numerous palaces and government buildings in order to re-establish it as the centre of government. He also built his own mosque. It was a transformation that involved the wholesale destruction of notable medieval buildings (including the Ablaq palace), and he expunged the Mamluk monuments as ruthlessly as he had expunged the Mamluks themselves. Much of this destruction was to make way for the mosque that now dominates the Citadel and much of the city.

OPPOSITE & BELOW: Mosque of Muhammad Ali.





ABOVE: Interior of the mosque of Muhammad Ali.

Muhammad Ali's mosque (1830–48) is a fitting monument to its age, in that it reflects his personality and symbolizes the Westernisation of the country. It is not Egyptian, but a synthesis of two cultures – European and Ottoman – and like Muhammad Ali, it is essentially a foreign import (he came from Macedonia). Its broad shape and composition are Ottoman, based on the Yeni Cami in Istanbul (1663), but the decoration is a decadent form of European baroque. Originally his chosen architect was a Frenchman, Pascal Coste, but his final choice fell to an Armenian. Nevertheless, his Francophile taste was to some extent satisfied in the construction of the clock-tower that overlooks the *sahn* (1845). This was a gift from Louis Philippe, king of France, and as a token of his gratitude Muhammad Ali gave Louis the obelisk that now stands in the Place de la Concorde (setting aside matters of aes-

thetic parity, this was a poor exchange in view of the fact that the clock never worked). Beneath the clock, in the centre of the *sahn*, is an octagonal ablutions fountain with florid baroque decoration carved out of alabaster. This and the alabaster cladding the *riwaq*s and first storey of the building (giving it its popular name 'The Alabaster Mosque') were brought from Upper Egypt.

The flashy baroque interior is un-Islamic in two respects: it bears little relation to any traditional Islamic style, but more to the point, its taste is profane rather than sacred. The central dome, surrounded by four half-domes, is a typical Ottoman arrangement, but this imposing spatial scheme is overwhelmed by the painted and gilded baroque decoration that swaggers around every surface above the ornamental alabaster covering the piers and first-storey walls. In even worse taste is the tomb of Muhammad Ali, described by Gustave Flaubert in 1849 as follows: 'All the tombs of Muhammad Ali's family are in deplorable taste – rococo, Europo-Oriental, painted and festooned like cabarets, with little ballroom chandeliers.'[32]

This description aptly applies to the interior as a whole and the ballroom comparison is most appropriate. Florence Nightingale, who saw the mosque being built, described it as 'tawdrily ornamented' and 'decorated like Drury Lane'.[33] Perhaps the last word concerning the mosque and Muhammad Ali's whole enterprise should go to another distinguished nineteenth-century visitor, Robert Curzon. Referring to the destruction of Mamluk buildings on the Citadel and to 'Joseph's Hall' (Hall of Justice) in particular, he has this to say:

> The hall which was a very fine room, divided into aisles by magnificent antique columns of red granite, has unfortunately been pulled down by Muhammad Ali. He did this to make way for his mosque which he has built of Egyptian alabaster, a splendid material, but its barbarous Armenian architecture offers a sad contrast to the stately edifice which has been ruthlessly destroyed.[34]

Today, Western tourists from cruise ships moored at Port Said visit the Pyramids, the Cairo Museum and the Citadel in one day. Usually their only lasting experience of Cairo's glorious Islamic architectural legacy is that represented by Muhammad Ali's 'barbarous' mosque. In addition to all those reasons outlined in the preface, it is this gross misrepresentation of Islamic culture to the Western tourist that prompted me to write this book.

Notes and References

Preface

1 Said, E. W., 'Egyptian Rites' (1983) published in *The Face of Tutankhamun*, ed. Christopher Frayling (London, Faber & Faber, 1992) p. 282.
2 *Description de l'Egypte: Pupliée par les ordres de Napoléon Bonaparte* edition complete (Cologne, Taschen, 1997) p. 13.
3 Searight, S., *The British in the Middle East* (London & The Hague, East-West Publications, 1979) p. 77.
4 During my early researches into the collection of Islamic woodwork in the Victoria and Albert Museum, London, I was astounded to find that many of the catalogue entries still consisted of the original handwritten notes by Stanley Lane-Poole, with little added since.

Introduction
Egypt and the Arab Conquest

1 Bagnall, R. S., 'The Fayum and its People', *Ancient Faces: Mummy Portraits from Ancient Egypt*, eds. Susan Walker and Morris Bierbrier (London, British Museum Press, 1997) p. 18.
2 Butler, A. J., *The Arab Conquest of Egypt* (Oxford, Oxford University Press, 1902) p. 42.

3 Kamil, J., *Coptic Egypt* (Cairo, The American University in Cairo Press, 1987) p. 14.
4 Lane-Poole, S., *A History of Egypt* (London, Frank Cass, 1968) p. 12.
5 Butler, A. J., op. cit., p. 244.
6 Stewart, D., *Great Cairo: Mother of the World* (Cairo, The American University in Cairo Press, 1996) p. 24.
7 Kubiak, W. B., *al-Fustat* (Cairo, The American University in Cairo Press, 1987) p. 52.
8 Butler, A. J., op. cit., p. 241.
9 Kubiak, W. B., op. cit., p. 56.
10 Kubiak, W. B., op. cit., p. 53.
11 Kubiak, W. B., op. cit., p. 56.
12 Butler, A. J., op. cit., p. 320.

Chapter One
Umayyad and Tulunid Architecture: Fustat and al-Qata'i

1 Hitti, P., *History of the Arabs*, 10th edition (London, Macmillan, 1970) p. 164.
2 Lane-Poole, S., op. cit., p. 9.
3 Kubiak, W. B., op. cit., pp. 62–3.
4 Kubiak, W. B., op. cit., pp. 65–71.
5 Kubiak, W. B., op. cit., p. 81.
6 Grabar, O., *The Formation of Islamic Art* (Newhaven & London, Yale University Press, 1973) p. 80.
7 The *Hadith* is the body of transmitted literature that records the life, actions and sayings of the Prophet. The following account regarding the curtain is recorded in Bukhari (d. 870: one of the earliest compilers and principle sources of *Hadith*): 'Anas said, "A'ishah had a figured curtain of red wool, with which she covered a side of her apartment. The Prophet (peace and blessings of Allah be on him) said: "Remove from us thy curtain, for its figures come before me in my prayers".' (Bukhari 8.15).
8 Esin, E., *Mecca the Blessed, Medinah the Radiant* (London, Elek Books, 1963) p. 73. According to K. A. C. Creswell the carpenter was called Baqum and was most likely an Abyssinian. See Creswell, K. A. C., *A Short Account of Early Muslim Architecture* (revised and supplemented by James W. Allan) (Cairo, The American University in Cairo Press, 1989) p. 4.

9 Kubiak, W. B., op. cit., p. 122.
10 Kubiak, W. B., op. cit., p. 129.
11 Creswell, K. A. C., op. cit., p. 8.
12 Creswell, K. A. C., op. cit., pp. 15–16.
13 Hillenbrand, R., *Islamic Architecture: Form, Function and Meaning* (Edinburgh, Edinburgh University Press, 1994) p. 46.
14 Creswell, K. A. C., op. cit., p. 304.
15 Ibn Duqmaq, *al-Intisar,* vol. IV, p. 69.
16 Hillenbrand, R., op. cit., p. 59.
17 al-Maqrizi, *al-Khitat*, vol. 2, p. 251 (*Kitab al-mawa'iz wa al-l'tibar bi Dhikr al-Khitat wa al-Athar*, vol. I–II (Cairo, 1853).
18 Creswell, K. A. C., op. cit., p. 307.
19 Creswell, K. A. C., op. cit., pp. 39, 308.
20 Behrens-Abouseif, D., *Islamic Architecture in Cairo: An Introduction* (Cairo, The American University in Cairo Press, 1989) p. 50.
21 Kubiak, W. B., op. cit., pp. 96–7.
22 Kubiak, W. B., op. cit., pp. 124–8.
23 Lane-Poole, S. (1968), op. cit., p. 30.
24 Holt, P., A. Lampton and B. Lewis, eds., *The Cambridge History of Islam*, vol. 1A (Cambridge, Cambridge University Press, 1970) pp. 178–9.
25 Creswell, K. A. C., op. cit., p. 383.
26 al-Balawi, *Sirat Ahmad ibn Tulun*, Kurd Ali's ed. (Damascus, 1939) p. 182, 11. 4–15.
27 Creswell, K. A. C., op. cit., pp. 395–6.
28 Creswell, K. A. C., op. cit., p. 405.
29 Ibid.
30 Behrens-Abouseif, D., op. cit., p. 55.
31 M. Tarek Swelim. 'The Minaret of Ibn Tulum Reconsidered', *The Cairo Heritage*, ed. Doris Behrens-Abouseif (Cairo & New York, The American University in Cairo Press, 2000) pp. 84–8.
32 Ibn Duqmaq, op. cit., IV, p. 123, 11. 2–3.
33 Jones, O., *The Grammar of Ornament* (London, Studio Editions, 1986) pp. 57–8.
34 al-Maqrizi, *al-Khitat*, trans. P. Casanova in *Mémoires de l'Institut français d'Archéologie Orientale du Caire*, vols. I–III, 1906, p. 215.

Chapter Two
Fatimid Architecture

1 Holt, P., A. Lampton and B. Lewis, op. cit., pp. 180–4.
2 Halm, H., *The Fatimids and their Traditions of Learning* (London, I. B. Tauris in association with The Institute of Ismaili Studies, 1997) pp. 3–12.
3 Behrens-Abouseif, D., op. cit., p. 68.
4 Beckwith, J., *Early Christian and Byzantine Art* (New Haven & London, Yale University Press, 1970) pp. 86–8.
5 Behrens-Abouseif, D., op. cit., p. 72. This was something of an oriental tradition, surviving in the Islamic world well into the Mughal period. At the Red Fort in Delhi a pavilion gate, the Naqqar Khana, or Drum House, performed such a function.
6 Halm, H., op. cit., p. 41.
7 Halm, H., op. cit., chap. 2.
8 Halm, H., op. cit., pp. 41–6.
9 Hillenbrand, R., op. cit., pp. 59–60.
10 Halm, H., op. cit., pp. 72–3.
11 al-Maqrizi, *al-Khitat*, op. cit., vol. 1, p. 458.
12 Behrens-Abouseif, D., op. cit., p. 68.
13 Lane-Poole, S. (1968), op. cit., pp. 125–34.
14 Ettinghausen, R. and O. Grabar, *The Art and Architecture of Islam, 650–1250* (New Haven & London, Yale University Press, 1987) pp. 176–8.
15 Hillenbrand, R., op. cit., pp. 166–7.
16 Hillenbrand, R., op. cit., p. 132.
17 Behrens-Abouseif, D., op. cit., p. 64.
18 Behrens-Abouseif, D., op. cit., p. 74.
19 Bloom, J., 'The Mosque of the Qarafa in Cairo', published in *Muqarnas*, vol. 4, ed. Oleg Grabar (Leiden, E. J. Brill, 1987) pp. 13–14.
20 Williams, C., 'The Cult of Alid Saints in the Fatimid Monuments of Cairo', published in *Muqarnas*, vol. 3, ed. Oleg Grabar (Leiden, E. J. Brill, 1985) p. 44.
21 Williams, C., op. cit., p. 40.
22 Other traditions claim the presence of the holy relic in the Great Mosque at Damascus.
23 Ibn Jubayr, *The Travels of Ibn Jubayr* (London, Broadhurst Translation, 1952) p. 37.
24 Holt, P., A. Lampton and B. Lewis, op. cit., pp. 201–3.

Chapter Three
The Decorative Arts of the Tulunids and Fatimids

1 Lane, A., *Early Islamic Pottery* (London, Faber & Faber, 1947) p. 14.

2 In his book, *Ceramics of the Islamic World in the Tareq Rajab Museum* (London & New York, I. B. Tauris, 2000), Géza Fehévári draws attention to a symposium sponsored by the Percival David Foundation, London (1970), in which William Watson stated that Tang splashed wares were a funerary art not made for export. In another paper, Jessica Rawson, M. Tite and M. J. Hughes put forward the possibility that Tang *sancai* wares, which were exported, may have influenced green splashed wares found in the Near East.

3 Contandi, A., *Fatimid Art at the Victoria and Albert Museum* (London, V&A Publications, 1998) p. 60.

4 Ellis, M., *Embroideries and Samplers from Islamic Egypt* (Oxford, Ashmolean Museum, 2001) p. 12.

5 Grabar, O., 'Architecture and Art' in Hayes, J.R., ed., *The Genius of Arab Civilisation: Source of Renaissance* (Oxford, Phaidon, 1978) p. 112.

6 Howard, D., *Venice and the East* (New Haven, Yale University Press, 2000) p. 102.

7 Hitti, P., op. cit., pp. 609–10.

8 Ettinghausen, R., *Arab Painting* (New York, Skira, 1977) p. 47.

9 Ettinghausen, R., op. cit., p. 50.

10 Jenkins, M., 'New Evidence for the History and Provenance of the So-Called Pisa Griffin', *Islamic Archaeological Studies*, vol. 1, 1978 (Cairo, Arab Republic of Egypt Organisation of Antiquities Museum Service) p. 79. Contadini, A. 'Il grifone di Pisa', in *Eredita dell'Islam – Arte Islamica in Italia,* no. 43, G. Curatola, ed., Cinsello Balsamo, 1993. Contadini, A., Camber, R. and Northover, P., 'Beasts that Roared: The Pisa Griffin and the New York Lion', *Cairo to Kabul: Afghan and Islamic Studies*, in Ball, W. and L. Harrow, eds., (London, Melisende, 2002) pp. 65–83.

11 Marangonis, B., 'Vetus Chronicon Pisanum', Codice Bib. Arsenale, Paris, *Archivo Storico Italiano*, ed. F. Bonaini (Florence, 1845), vol. VI, part 2, p. 5.

12 Ward, R., *Islamic Metalwork* (London, British Museum Press, 1993) p. 66.

13 Contandi, A. (1998), op. cit., pp. 86–7.

14 Contandi, A. (1998), op. cit., p. 85.
15 Lane, A., op. cit., p. 23.
16 The Arts Council of Great Britain, *The Arts of Islam*, exhibition catalogue (London, Hayward Gallery, 1976) p. 119.
17 Scanlon, G., and R. Pinder-Wilson, *Fustat Glass of the Early Islamic Period: First Finds by the American Research Center in Egypt 1964–1980* (London, Altajir World of Islam Press, 2001) p. 104.
18 Contandi, A. (1998), op. cit., p. 20.
19 Contandi, A. (1998), op. cit., pp. 29, 35, n. 75.
20 Contandi, A. (1998), op. cit., p. 36.
21 Robinson, B. W., ed., *Islamic Art in the Keir Collection* (London, Faber & Faber, 1988) p. 306.
22 Lamm, C. J., *Mittelalterliche Glasser und Steinschnittarbeiten aus dem Nahen Osten*, 2 vols (Berlin, 1930) p. 68, n. 5.
23 Carboni, S. and D. Whitehouse, eds., *Glass of the Sultans* (New Haven London, Yale University Press, 2001) p. 211.
24 Carboni, S. and D. Whitehouse, op. cit., pp. 217–18.
25 Carboni, S. and D. Whitehouse, op. cit., pp. 106, 137.
26 Contandi, A. (1998), op. cit., p. 101.
27 Carboni, S. and D. Whitehouse, op. cit., p. 127.
28 Contandi, A., (1998), op. cit., (1998). p. 101.
29 Ettinghausen, R. and O. Grabar, op. cit., p. 196.
30 Scanlon, G. and R. Pinder-Wilson, op. cit., p. 91.
31 Beckwith, J., *Early Christian and Byzantine Art* (New Haven & London, Yale University Press, 1979) p. 258.
32 Ettinghausen, R., op. cit., p. 38.
33 Baker, P., *Islamic Textiles* (London, British Museum Press) 1995, p. 57.

Chapter Four
Ayyubid Architecture

1 Holt, P., A. Lampton and B. Lewis, op. cit., pp. 203–4.
2 MacKenzie, N. D., *Ayyubid Cairo* (Cairo, The American University in Cairo Press, 1992) p. 80.
3 al-Maqrizi, *al-Khitat*, op. cit., vol. 1, p. 496.
4 Runciman, S., *A History of the Crusades: 3 The Kingdom of Acre* (London, Penguin, 1990) p. 78.

5 Maalouf, A., *The Crusades through Arab Eyes* (Cairo, The American University in Cairo Press, 1990) p. 179.
6 Ibn Jubayr, op. cit., p. 43.
7 MacKenzie, N. D., op. cit., p. 61.
8 MacKenzie, N. D., op. cit., p. 60.
9 In Behrens-Abouseif, D., op. cit., p. 81.
10 Lyster, W., *The Citadel of Cairo: A History and Guide* (Cairo, The Palm Press, 1993) p. 15.
11 MacKenzie, N. D., op. cit., p. 126.
12 MacKenzie, N. D., op. cit., p. 147.
13 Ibn Jubayr, op. cit., pp. 39–42.
14 Behrens-Abouseif, op. cit., p. 85.
15 al-Maqrizi, *al-Khitat*, op. cit., vol. 2, p. 183.
16 Ibid., pp. 183–4.
17 Hillenbrand, R., op. cit., p. 320.

Chaper Five
The Architecture of the Bahri Mamluks

1 Abu Shama, *Tarajim al-qarnayn al-sadis wa'l tasi*, ed. Muhammad Zahid al-Kawthari, Cairo, 1366/1947, p. 208.
2 Ibn Taghribirdi, *Nujum*, VII, p. 60 (*al-Nujum al-zahira fi muluk Misr wa'l Qahira*, 16 vols, 1929–72).
3 Holt, P., A. Lampton and B. Lewis, op. cit., pp. 214–16.
4 Stierlin, H. & A., *Splendours of an Islamic World: Mamluk Art in Cairo 1250–1517* (London & New York, Tauris Parke Books, 1997) p. 24.
5 Hillenbrand, R., op. cit., p. 50.
6 Lane, E. W., *An Account of the Manners and Customs of the Modern Egyptians* (New York, Dover, 1973) p. 287.
7 Nasr, S. H., *Islamic Science: An Illustrated Study* (London, World of Islam Festival Publishing Co. Ltd, 1976) pp. 179–80.
8 Behrens-Abouseif, D., op. cit., p. 96.
9 In Behrens-Abouseif, D., op. cit., p. 97.
10 Behrens-Abouseif, D., op. cit., p. 98.
11 Hillenbrand, R., op. cit., p. 330.
12 Behrens-Abouseif, D., op. cit., p. 101.
13 Meinecke, M., 'Die Mamlukischen Faience Dekorationen: Eine Werkstatte aus Tabriz in Kairo (1330–1355)', *Kunst des Orients,* vol. II (1976–7), pp. 85 ff.

14 Behrens-Abouseif, D., op. cit., p. 82.
15 Cited by Cresswell in *The Muslim Architecture of Egypt*, vol. 11 (Oxford, Oxford University Press, 1959) p. 260.
16 Hillenbrand, R., op. cit., p. 200.
17 Fernandes, L., 'The Foundation of Baybars Al-Jashankir: Its Waqf, History, and Architecure', *Muqarnas*, vol. 4, ed. Oleg Grabar (Leiden, E. J. Brill, 1987) p. 23.
18 Fernandes, L., op. cit., pp. 25–7.
19 Meinecke, Michael, 'Die Moschee des Amirs Aqsunqur an-Nasiri in Kairo', *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo,* 29, 1973, pp. 9 ff.
20 Hillenbrand, R., op. cit., p. 196.
21 See Behrens-Abouseif, D., op. cit., p. 128, and S. Blair and J. Bloom, *The Art and Architecture of Islam 1250–1800* (New Haven & London, Yale University Press, 1995) p. 84.

Chapter Six
The Decorative Arts of the Ayyubids and Mamluks

1 Abd al-Ra'uf Ali Yusuf, 'Egyptian Luster-painted Pottery from the Ayyubid and Mamluk Periods', in D. Behrens-Abouseif, ed., *The Cairo Heritage* (Cairo & New York, The American University in Cairo Press, 2000) pp. 263–74.
2 Fehévári, G., op. cit., p. 254.
3 El. Basha, H., 'Mamluk Artifacts at Cairo Museum revealing Chinese Influences', *Islamic Archaeological Studies*, vol. 4, 1991 (Cairo, Arab Republic of Egypt Organisation of Antiquities Museum Service) p. 78.
4 Kuhnel, E., *Islamic Arts* (London, Bell & Sons, 1970) p. 129.
5 El. Basha, op. cit., pp. 78–80.
6 The Arts Council of Great Britain, *The Arts of Islam*, op. cit., p. 181.
7 Ward, R., op. cit., p. 85.
8 Ettinghausen, R. and O. Grabar, op. cit., p. 371.
9 Ward, R., op. cit., p. 26.
10 Blair, S. and J. Bloom, op. cit., p. 97.
11 The Arts Council of Great Britain, *The Arts of Islam*, op. cit., p. 182.
12 Blair, S. and J. Bloom, op. cit., p. 99.
13 Lane-Poole, S., *The Art of the Saracens in Egypt* (Beirut, Librairie Byblos) first printed 1886, p. 182.

14 The Metropolitan Museum of Art, *The Metropolitan Museum of Art: The Islamic World* (New York, The Metropolitan Museum of Art, 1987) p. 55.
15 Ward, R., op. cit., p. 108.
16 The Arts Council of Great Britain, *The Arts of Islam*, op. cit., p. 187.
17 Lane-Poole, S. (1886), op. cit., pp. 226–31.
18 Ellis, M., op. cit., p. 80.
19 *The Metropolitan Museum of Art: The Islamic World*, op. cit., p. 48.
20 Ward, R., op. cit., p. 35.
21 In 1415 Sultan al-Mu'ayyad illegally obtained Sultan Hasan's doors and installed them in his new mosque near Bab Zuwaila, where they can now be seen. A more recent example of cultural plunder is their appearance in the background to Valentine Princep's painting *At the Golden Gate* (1882) in Manchester City Art Gallery. Princep exercised considerable poetic licence by using fourteenth-century Mamluk art to illustrate a New Testament parable – that of the wise and foolish virgins.
22 Critchlow, K., *Islamic Patterns* (London, Thames & Hudson, 1976) p. 189.
23 Lings, M., *The Quranic Art of Calligraphy and Illumination* (London, World of Islam Festival Trust, 1976) pp. 115–17.
24 Rogers, M., 'The Stones of Barquq: Building materials and architectural decoration in late fourteenth-century Cairo', *Apollo*, vol. CIII, no. 170 (new series) (London, April 1976) p. 312.
25 Herzfeld, E., *Materiaux pour un Corpus Inscriptiorum Arabicarum, III, Syrie du Nord: Inscriptions et Monuments d' Alep, 1*, Cairo, 1955, pp. 124–8.
26 Lane-Poole, S. (1886), op. cit., p. 137.
27 Lane, E. W., op. cit., pp. 7–9.
28 The Arts Council of Great Britain, *The Arts of Islam*, op. cit., p. 291.
29 Folio 6. India Office Library, Ethe 2221. Quoted in Arnold, T., *Painting in Islam* (New York, Dover, 1965) p. 2.
30 Lings, M., *The Qur'an: A British Library Exhibition* (London, World of Islam Festival Publishing Company, 1976) p. 13.
31 Lings, M., op. cit. (*British Library Exhibiton*), p. 14.
32 The words of al-Hariri quoted from H. A. R. Gibb, *Arabic Literature* (Oxford, Oxford University Press, 1974) p. 124.
33 Mathews, T., *The Art of Byzantium* (London, Everyman Art Library, 1988) p. 74.
34 Hitti, P., op. cit., pp. 302–3.
35 Metropolitan Museum of Art, op. cit., p. 51

36 Ettinghausen, R., op. cit., p. 145.
37 Ettinghausen, R., op. cit., pp. 140–1.
38 Ettinghausen, R., op. cit., pp. 145–7.
39 Ettinghausen, R., op. cit., pp. 81–3.
40 Ettinghausen, R., op. cit., p. 184.
41 Robinson, B. W., op. cit., p. 34.
42 Ellis, M., op. cit., pp. 7–8.
43 Ellis, M., op. cit., pp. 21.
44 Baker, P., op. cit., p. 69.
45 Ellis, M. op. cit., pp. 30, 91.
46 Ellis, M., op. cit., pp. 92–3.
47 Baker, P., op. cit., p. 78.

Chapter Seven
The Architecture of the Burji Mamluks

1 King, J. W., *Historical Dictionary of Egypt* (Cairo, The American University in Cairo Press, 1989) p. 215.
2 Rogers, M., op. cit., *Apollo*, Vol. C11, No. 170 (new series), April 1976, p. 307.
3 Ibid.
4 Ibid. This is one of the themes in his paper.
5 Rogers, M., *The Making of the Past: The Spread of Islam* (Oxford, Elsevier/Phaidon, 1975) pp. 96–8.
6 Rogers, M. (1975), op. cit., p. 104.
7 Rogers, M., op. cit., *Apollo*, Vol. C11, No. 170 (new series), April 1976, p. 308.
8 Behrens-Abouseif, D., op. cit., p. 22.
9 Behrens-Abouseif, D., op. cit., p. 142.
10 Rogers, M. (1975), op. cit., p. 98.
11 Behrens-Abouseif, D., op. cit., p. 142.
12 Hillenbrand, R., op. cit., p. 199.
13 Hillenbrand, R., op. cit., pp. 199–200.
14 Ibid.
15 Behrens-Abouseif, D., op. cit., p. 144.
16 Lane, E. W., op. cit., pp. 237–9.
17 Behrens-Abouseif, D., op. cit., pp. 23–4.
18 Behrens-Abouseif, D., op. cit., p. 147.
19 Blair, S. and J. Bloom, op. cit., p. 92.

20 Seton-Williams, V., and P. Stocks, *Blue Guide: Egypt* (London, A & C Black, 1988) p. 305.
21 Blair, S., and J. Bloom, op. cit., p. 110.
22 Behrens-Abouseif, D., op. cit., p. 154.
23 Seton-Williams, V. and P. Stocks, op. cit., p. 266.
24 Stierlin, H. & A., op. cit., pp. 164–7.
25 Behrens-Abouseif, D., op. cit., p. 39.
26 Lane, E. W., op. cit., pp. 20–1.
27 Behrens-Abouseif, D., op. cit., pp. 40–1.
28 Lane, E. W., op. cit., p. 318.
29 Lane-Poole, S. (1968), op. cit., p. 352.
30 Seton-Williams, V. and P. Stocks, op. cit., p. 312.
31 Behrens-Abouseif, D., op. cit., p. 156.
32 *Flaubert in Egypt*, ed. F. Steegmuller, cited in Lyster, op. cit., p. 97.
33 Nightingale, *Letters*, p. 23, cited in Lyster, op. cit., p. 66.
34 Curzon, R., *Visits to Monasteries of the Levant* (London, George Newnes Ltd, 1897) pp. 31–2.

Glossary

Islamic and Oriental Terms

ablaq:	two-toned masonry usually arranged in horizontal courses
baraka:	blessing
batin:	esoteric interpretation of *sharia*
bismillah:	invocation
caravansarai:	accommodation for travellers, merchants and animals
da'i/du'at:	missionary/missionaries
dhimi:	Christians and Jews under Muslim rule
dikka:	a raised platform used by prayer leaders
durqa'a:	a sunken space at the centre of a court in domestic and palace architecture
Hadith:	traditions, sayings and accounts of the Prophet
hammam:	baths
harem:	the women's quarters of a house or palace
hijra:	the migration from Mecca
imam:	prayer leader; spiritual leader of the Shi'ite sect
imaret:	a soup kitchen
iwan:	an open vaulted hall or a portal
jami:	congregational mosque
khan or *han*:	a form of inn, warehouse or urban caravansarai
khanqah:	a residence for Sufis
khutba:	a sermon delivered at the Friday noon prayers

Kufic: early form of calligraphy used in architectural inscriptions and chapter headings in the Qur'an. It is usually elongated and rectilinear in style

kulliya: an Ottoman mosque complex

kursis/kursi: free-standing metal cupboard/table or lectern with a V-shaped top for supporting the Qur'an

mabkhara: incense burner

madhhab/madhahib: school/schools of law

madjlis: a reception room in a house

madrasa: theological college or law school

mahout: a person who works with and rides an elephant

manara: place of light or fire

maq'ad: a loggia on the second storey of a house

maqsura: a screened enclosure in a mosque for the privacy and protection of the caliph or sultan

maristan: a hospital

mashhad: shrine or mausoleum of a martyr

mashrabiyya: screens made up of small pieces of turned Egyptian wood

masjid: neighbourhood mosque, as distinguished from the larger *jami* or congregational mosque

maulid: festival celebrating the birthday or anniversary of the Prophet or a saint

mawali: non-Arab converts to Islam

mihrab: prayer niche

minbar: pulpit

muezzin: a man who calls Muslims to prayer from the minaret of a mosque

muqarnas: stalactite sections used to fill or form a vault, niche or frieze

pishtaq: a lofty screen framing an arch or portal

qa'a: in domestic and palace architecture, a covered reception hall with two or four *iwan*s

qadi: Muslim judge

qaysariyya: a bazaar for the sale of valuable goods

qibla: the direction of prayer

rab'/rub': apartment building

ribat: fortified accommodation for soldiers – sometimes it is another name for a caravansarai or hospice

riwaq: a cloister arranged around a courtyard
sabil: a public fountain
sabil-kuttab: a Qur'an school combined with public fountain
sahn: the courtyard of a mosque
shahada: profession of faith
sharia: religious law
silsila: tradition
Sufi: mystic or dervish
sunduq: a box used for storing copies of the Qur'an
tabhane: a part of an Ottoman mosque or *kulliya* providing accommodation for travellers and dervishes
tariqa: Sufi brotherhood or form of teaching associated with a particular sheikh
tiraz: woven and embroidered Kufic inscription
ulama: learned authorities
umma: the Muslim community
waqala: inn, warehouse or urban caravansarai
waqf: land or property perpetually endowed for charitable purposes
zahir: exoteric interpretation of the *sharia*
zawiya: residential accommodation for Sufis
ziyada: a space, usually enclosed by a wall, immediately surrounding a mosque

English Terms

aquamanile: animal-shaped ewer
architrave: a horizontal member or moulding; moulded frame surrounding a door or window
arcuate: form of structure based on the arch
Arianism: Christian heresy that originated with the priest Arius that denied the divinity of Christ
chamfer: a bevel or groove, or an angled cut, usually 45 degrees, into a sharp right-angled corner
chevron: a zigzag pattern
coffering: form of ceiling decoration made up of sunken squares or polygons
corbel: a bracket, projecting stone or series of projecting stones

dado:	in classical architecture, the portion of a plinth or pedestal between the base and cornice
drum:	a circular wall supporting a dome
exedra:	a semi-circular recess, niche or apse
fenestration:	composition of windows
finial:	a crowning ornament at the top of a gable or pinnacle
fluting:	concave grooves usually cut vertically into a column
foil:	a leaf-shaped curve
fosse:	defensive trench
hypostyle hall:	hall of columns
impost:	a block of stone usually with angled sides placed on top of a column under the capital
loggia:	an open gallery or balcony
lozenge:	diamond-shaped pattern
machicoulis/ machicolation:	in military architecture, a corbelled gallery with arrowslits and openings in the floor through which to pour molten lead and boiling oil
Melkite:	an Eastern Christian adhering to the Orthodox faith as defined by the councils of Ephesus (AD 431) and Chalcedon (AD 451) and as accepted by the Byzantine emperor
merlon:	the raised part of a battlement or crenellation/*stepped merlon*: the stepped pyramidal form originating in the ancient Near East
Monophysite:	a person who holds that there is only one inseparable nature (partly divine, partly and subordinately human) in the person of Christ
Nestorianism:	the Christian doctrine that there were two separate persons in Christ, one human and one divine, maintained by some ancient churches of the Middle East
oculus:	circular window or opening
pendentive:	a curved triangular section which fits a dome to a square bay
pier:	square-sectioned column or solid masonry support
pisé:	a compound of kneaded mud and gravel, rammed between boards or into shuttering

soffit:	the underside of an arch
spandrel:	the triangular space formed by the springing of the arches
squinch:	a triangular arch or niche placed diagonally or in corners in order to fit a dome or polygon to a square bay
string course:	a continuous horizontal band set in a wall
stucco:	a form of plasterwork using an aggregate of plaster with cement or concrete
temenos:	in classical architecture, the wall of a sacred enclosure
tympanum:	the space enclosed by an arch above the lintel of a door
trabeate:	form of structure based on the column and beam
voussoirs:	wedge-shaped stones which lock together to form an arch. Joggled voussoirs are interlocking stones with jigsaw-like notches and grooves to prevent slippage
zone of transition:	the intermediate support, usually consisting of pendentives, squinches, *muqarnas* or corbels, that makes possible the structural transition from square or polygonal bay to circular drum or dome

Chronology of Dynasties and Rulers

Governors of Egypt for Rashidun Caliphs 640–658	
640	Amr ibn al-As: Conqueror and first governor of Egypt
646–58	Five other governors

Governors for Umayyad Caliphs 658–750	

Governors for Abbasid Caliphs 750–868	

Tulunids 868–905	
868–84	Ahmad ibn Tulun
884–96	Khumarawaih: son of Ahmad ibn Tulun
896	Jaysh: son of Khumarawaih
896–905	Harun: son of Khumarawaih
905	Sha'ban: son of Ahmad ibn Tulun

Governors for Abbasid Caliphs 905–35	

Ikhshidid 935–69	
935–46	Muhammad ibn Tughj
946–61	Unujur: son of Muhammad ibn Tughj
961–66	Ali: son of Muhammad ibn Tughj
966–68	Kafur: tutor of sons of Muhammad
968–69	Ahmayd: son of Ali

Fatimid Caliphs 969–1171	
969–75	al-Mu'izz
975–96	al-Aziz: son of al-Mu'izz
996–1021	al-Hakim: son of al-Aziz
1021–36	al-Zahir: son of al-Hakim
1036–94	al-Mustansir: son of al-Zahir
1094–1101	al-Mustali: son of al-Mustansir
1101–31	al-Amir: son of al-Mustali
1131–49	al-Hafiz: cousin of al-Amir
1149–54	al-Zafar: son of al-Hafiz
1154–60	al-Fa'iz: son of al-Zafar
1160–71	al-Adid: son of al-Fa'iz

Ayyubid Sultans 1169–1250	
1171–93	Salah al-Din (Saladin)
1193–98	al-Aziz: son of Salah al-Din
1198–1200	al-Mansur: son of al-Aziz
1200–18	al-Adil I: brother of Salah al-Din
1218–38	al-Kamil: son of al-Adil I
1238–40	al-Adil II: son of al-Kamil
1240–49	al-Salih Ayyub: son of al-Kamil
1249–50	al-Mu'azzam Turan Shah: son of al-Salih Ayyub
1250	al-Ashraf Musa: great nephew of al-Salih Ayyub

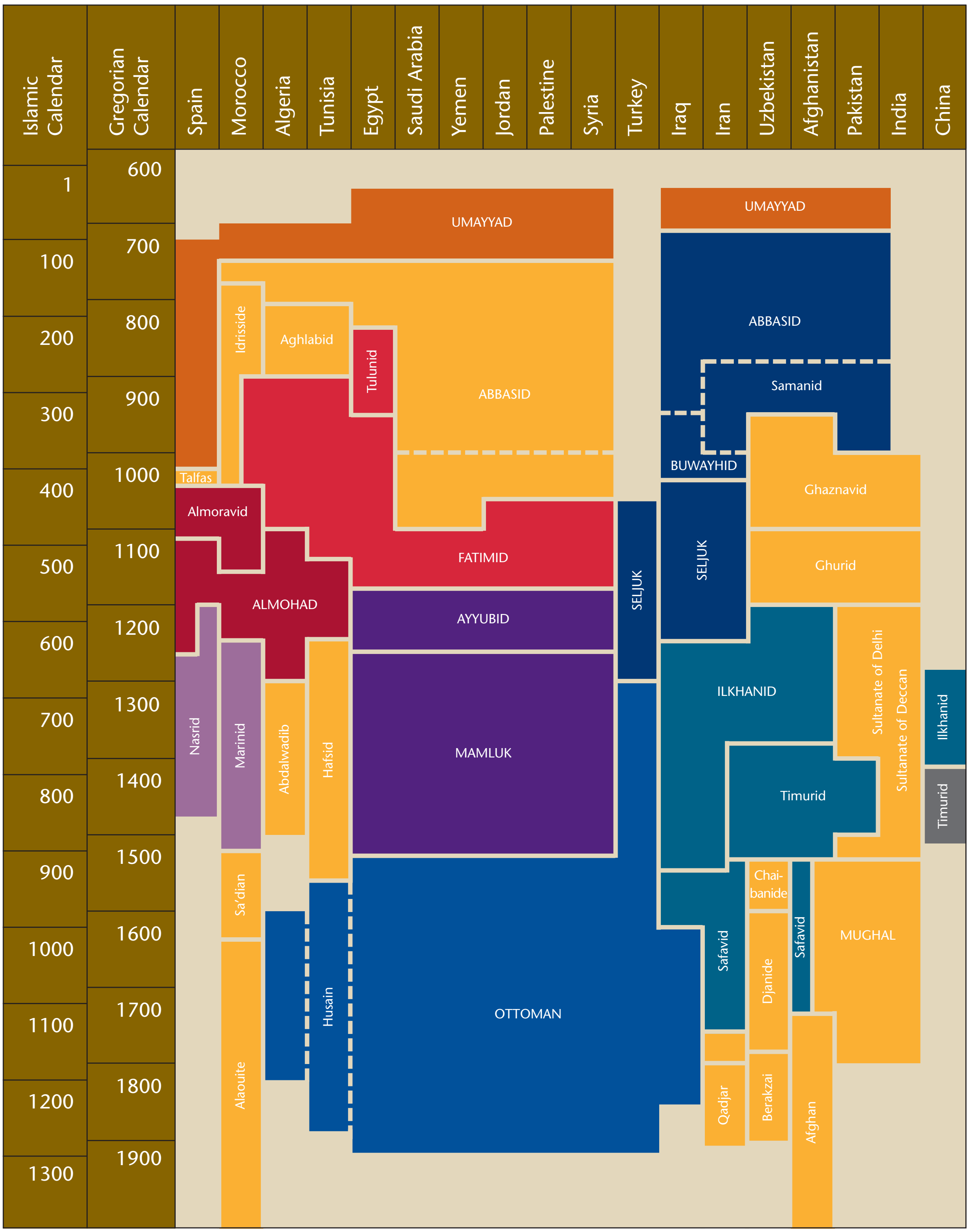
Bahri Mamluk Sultans 1250–1382	
1250	Shajar al-Durr: wife of al-Salih Ayyub
1250–57	al-Mu'izz Aybak: mamluk of al-Salih Ayyub
1257–59	al-Mansur Ali I: son of Aybak
1259–60	al-Muzzafar Qutuz: mamluk of al-Salih Ayyub
1260–77	al-Zahir Baibars (I): mamluk of al-Salih Ayyub
1277–80	al-Sa'id Baraka Khan: son of Baibars
1280	al-Adil Salamish: son of Baibars
1280–90	al-Mansur Qala'un al-Alfi: mamluk of al-Salih Ayyub
1290–94	al-Ashraf Khalil: son of Qala'un
1294–95	al-Nasir Muhammad I (1st Reign): son of Qala'un

1295–97	al-Adil Kitbugha: mamluk of Qala'un
1297–99	al-Mansur Lajin: mamluk of Qala'un
1299–1309	al-Nasir Muhammad I (2nd Reign)
1309–10	al-Muzzafar Baibars (II) al-Jashankir: mamluk of Qala'un
1310–40	al-Nasir Muhammad I (3rd Reign)
1340–41	al-Mansur Abu Bakr: son of al-Nasir Muhammad
1341–42	al-Ashraf Kujuk: son of al-Nasir Muhammad
1342	al-Nasir Ahmad I: son of al-Nasir Muhammad
1342	al-Salih Isma'il: son of al-Nasir Muhammad
1345–46	al-Kamil Sha'bani: son of al-Nasir Muhammad
1346–47	al-Muzzafar Hajji I: son of al-Nasir Muhammad
1347–51	al-Nasir al-Hasan (1st Reign): son of al-Nasir Muhammad
1351–54	al-Salih Salih: son of al-Nasir Muhammad
1354–61	al-Nasir al-Hasan (2nd Reign)
1361–63	al-Mansur Muhammad II: son of Hajji I
1363–76	al-Ashraf Sha'ban II: grandson of al-Nasir Muhammad
1376–82	al-Mansur Ali II: son of Sha'ban II
1382	al-Salih Hajji II (1st Reign): son of Sha'ban II

Burji Mamluk Sultans
1382–1517

1382–89	al-Zahir Barquq (1st Reign): mamluk of Sha'ban II
1389–90	al-Hajji II (2nd Reign: with title al-Muzzafar)
1390–99	al-Barquq (2nd Reign)
1399–1405	al-Nasir Faraj (1st Reign): son of al-Barquq
1405	al-Mansur Abd al-Aziz: son of al-Barquq
1405–12	al-Nasir Faraj (2nd Reign)
1412	al-Adil al-Musta'in
1412–21	al-Mu'ayyad Shaykh: mamluk of al-Barquq
1421	al-Muzzafar Ahmad II: son of Mu'ayyad Shaykh
1421	al-Zahir Tatar: mamluk of al-Barquq
1421–22	al-Salih Muhammad III: son of Tatar
1422–37	al-Ashraf Barsbay: mamluk of Barquq
1437–38	al-Aziz Yusuf: son of Barsbay
1438–53	al-Zahir Jaqmaq: mamluk of Barsbay
1453	al-Mansur 'Uthman: son of Jaqmaq
1453–61	al-Ashraf Inal: mamluk of Barquq
1461	al-Mu'ayyad Ahmad III: son of Inal
1461–67	al-Zahir Khushqadam: mamluk of Mu'ayyad Shaykh
1467–68	al-Zahir Yilbay: mamluk of Mu'ayyad Shaykh
1468	al-Zahir Timurbugha: mamluk of Jaqmaq
1468–96	al-Ashraf Qa'it-Bay: mamluk of Jaqmaq
1496–98	al-Nasir Muhammad IV: son of Qa'it-Bay
1498–1500	al-Zahir Qansuh I: maternal uncle of Muhammad IV
1500–01	al-Ashraf Janbalat: mamluk of Qa'it-Bay
1501	al-Adil Tuman Bay I: mamluk of Qa'it-Bay
1501–17	al-Ashraf Qansuh II al-Ghawri: mamluk of Qa'it-Bay
1517	al-Ashraf Tuman Bay II: mamluk of Qa'it-Bay

Table of Dynasties



Bibliography

Arnold, T., *Painting in Islam* (New York, Dover, 1965)

The Arts Council of Great Britain, *The Arts of Islam*, exhibition catalogue (London, Hayward Gallery, 1976)

— *Islamic Carpets from the Collection of Joseph V. McMullan*, exhibition catalogue (London, Hayward Gallery, 1972)

Baker, P., *Islamic Textiles* (London, British Museum Press, 1995)

Ball, W. and L. Harrow (eds.), *Cairo to Kabul: Afghan and Islamic Studies* (London, Melisende, 2002)

El. Basha, H., 'Mamluk Artifacts at Cairo Museum revealing Chinese Influences', *Islamic Archaeological Studies*, vol. 4, 1991 (Cairo, Arab Republic of Egypt Organisation of Antiquities Museum Service)

Behrens-Abouseif, D., *Islamic Architecture in Cairo: An Introduction* (Cairo, American University in Cairo Press, 1989)

— *The Minarets of Cairo*, (Cairo, American University in Cairo Press, 1985)

Behrens-Abouseif, D. (ed.), *The Cairo Heritage* (Cairo and New York, The American University in Cairo Press, 2000)

Blair, S. and J. Bloom, *The Art and Architecture of Islam 1250–1800* (New Haven & London, Yale University Press, 1995)

Bloom, J., 'The Mosque of the Qarafa in Cairo', published in *Muqarnas*, vol. 4, ed. Oleg Grabar (Leiden, E. J. Brill, 1987)

Bowman, A. K., *Egypt after the Pharaohs* (London, British Museum Press, 1986)

Brend, B., *Islamic Art* (London, British Museum Press, 1991)

Burckhardt, T., *Art of Islam* (London, World of Islam Festival Publishing Company, 1976)

Butler, A. J., *The Arab Conquest of Egypt* (2nd edition) (Oxford, Oxford University Press, 1902)

Caiger-Smith, A., *Lustre Pottery* (London, The Herbert Press, 1991)

Carboni, S. and D. Whitehouse (eds.), *Glass of the Sultans* (New Haven and London, Yale University Press, 2001)

Contandi, A., *Fatimid Art at the Victoria and Albert Museum* (London, V&A Publications, 1998)

Creswell, K. A. C. *The Muslim Architecture of Egypt* (Oxford, Oxford University Press, 1959)

— *A Short Account of Early Muslim Architecture* (London, Penguin, 1989)

Critchlow, K., *Islamic Patterns* (London, Thames & Hudson, 1976)

Description de l'Egypte: Pupliée par les ordres de Napoléon Bonaparte, edition complete (first published Paris, J. Jomard, 1812, republished Cologne, Taschen, 1997)

Ellis, M., *Embroideries and Samplers from Islamic Egypt*, Oxford, Ashmolean Museum, 2001

El Said, I. and A. Parman, *Geometric Concepts in Islamic Art* (London, World of Islam Festival Publishing Company, 1976)

Ettinghausen, R., *Arab Painting* (New York, Skira, 1977)

Ettinghausen, R. and O. Grabar, *The Art and Architecture of Islam, 650–1250* (New Haven & London, Yale University Press, 1987)

Fehérvári, G., *Islamic Pottery: A Comprehensive Study based on the Barlow Collection* (London, Faber & Faber, 1973)

— *Ceramics of the Islamic World in the Tareq Rajab Museum* (London and New York, I.B. Tauris, 2000)

Fernandes, L., 'The Foundation of Baybars Al-Jashankir: Its Waqf, History, and Architecture', *Muqarnas*, vol. 4, ed. Oleg Grabar (Leiden, E. J. Brill, 1987)

Frishman, M. and Hasan-Uddin Khan, *The Mosque: History, Architectural Development and Regional Diversity* (London, Thames & Hudson, 1994)

Gabra, G., *Cairo: The Coptic Museum and Old Churches* (Cairo, The Egyptian International Publishing Company – Longman, 1993)

Gibb, H. A. R., *Arabic Literature* (Oxford, Oxford University Press, 1974)

Grabar, O., *The Formation of Islamic Art* (New Haven & London, Yale University Press, 1973)

— 'Architecture and Art' in Hayes, J. R., ed. — *The Genius of Arab Civilisation: Source of Renaissance* (Oxford, Phaidon, 1978)

Grube, E., *The World of Islam* (London, Paul Hamlyn, 1966)

Halm, H., *The Fatimids and their Traditions of Learning* (London, I. B. Tauris in association with The Institute of Ismaili Studies, 1997)

Hayes, J. R., ed., *The Genius of Arab Civilisation: Source of Renaissance* (Oxford, Phaidon, 1978)

Hillenbrand, R., *Islamic Architecture: Form, Function and Meaning* (Edinburgh, Edinburgh University Press, 1994)

Hitti, P., *History of the Arabs* (10th ed.) (London, Macmillan, 1996)

Hoag, J., *Islamic Architecture* (London & New York, Faber & Faber/Electra, 1975)

Hoag, J., *Western Islamic Architecture* (London, Studio Vista, 1968)

Holt, P. M., *The Age of the Crusades* (London, Longman, 1986)

Holt, P., A. Lampton, and B. Lewis, eds., *The Cambridge History of Islam*, vol. 1A (Cambridge, Cambridge University Press, 1970)

Honderlink, H., ed., *Coptic Art and Culture* (Cairo, Shoudy Publishing House, 1990)

Howard, D., *Venice and the East* (New Haven, Yale University Press, 2000)

Irwin, R., *Islamic Art in Context* (New York, Abrams, 1997)

Jairazbhoy, R., *An Outline of Islamic Architecture* (Bombay, Asia Publishing House, 1972)

Jenkins, M., 'New Evidence for the History and Provenance of the so-called Pisa Griffen,' *Islamic Archaeological Studies*, vol. 1, 1978 (Cairo, Arab Republic of Egypt Organisation of Antiquities Museum Service)

Jones, O., *The Grammar of Ornament* (London, Studio Editions, reprinted 1988)

Kamil, J., *Coptic Egypt* (Cairo, The American University in Cairo Press, 1987)

King, J. W., *Historical Dictionary of Egypt* (Cairo, The American University in Cairo Press, 1989)

Kubiak, W. B., *Al-Fustat* (Cairo, The American University in Cairo Press, 1987)

Kuhnel, E., *Islamic Arts* (London, Bell & Sons, 1970)

Kybalová, L., *Coptic Textiles* (London, Paul Hamlyn, 1967)

Lane, A., *Early Islamic Pottery* (London, Faber & Faber, 1947)

Lane, E. W., *An Account of the Manners and Customs of the Modern Egyptians* (New York, Dover, 1973)

Lane-Poole, S., *The Art of the Saracens in Egypt* (first printed London 1886) (Beirut, Librairie Byblos)

— *A History of Egypt* (London, Frank Cass, 1968) (first published 1901)
Lawrence, T. E., *Crusader Castles* (London, Immel Publishing, 1992)
Lewis, B., *The Assassins* (London, Al Saqi Books, 1985)
Lings, M., *The Qur'an: A British Library Exhibition* (London, World of Islam Festival Publishing Company, 1976)
— *The Quranic Art of Calligraphy and Illumination* (London, World of Islam Festival Publishing Company, 1976)
Lyster, W., *The Citadel of Cairo: A History and Guide* (Cairo, The Palm Press, 1993)
Maalouf, A., *The Crusades through Arab Eyes* (Cairo, The American University in Cairo Press, 1990). First published as *Les croisades vues par les Arabes* (Paris, Editions J. C. Lattes, 1983)
MacKenzie, N. D., *Ayyubid Cairo* (Cairo, The American University in Cairo Press, 1992)
Mayer, L. A., *Islamic Wood Carvers and Their Works* (Geneva, 1958)
The Metropolitan Museum of Art: The Islamic World (New York, The Metropolitan Museum of Art, 1987)
Michell, G., ed., *Architecture of the Islamic World* (London, Thames & Hudson, 1978)
Nasr, S. H., *Islamic Science: An Illustrated Study* (London, World of Islam Festival Publishing Co. Ltd, 1976)
Norwich, J. J., *Byzantium: The Early Centuries* (London, Guild Publishing, 1988)
Öney, G., *Ceramic Tiles in Islamic Architecture* (Istanbul, Ada Press, 1987)
Parker, R. and S. Sabin, *A Practical Guide to the Islamic Monuments in Cairo* (Cairo, American University in Cairo Press, 1973)
Porter, V., *Islamic Tiles* (London, British Museum Press, 1995)
Robinson, B. W., ed., *Islamic Art in the Keir Collection* (London, Faber & Faber, 1998)
Rogers, M., *The Making of the Past: The Spread of Islam* (Oxford, Elsevier/Phaidon, 1975)
— 'The Stones of Barquq: Building materials and architectural decoration in late fourteenth-century Cairo', *Apollo*, vol. CII, no. 170 (new series) (London, April 1976)
Runciman, S., *A History of the Crusades: 1. The First Crusade* (London, Penguin, 1990)
— *A History of the Crusades: 2. The Kingdom of Jerusalem* (London, Penguin, 1990)
— *A History of the Crusades: 3. The Kingdom of Acre* (London, Penguin, 1990)

Scanlon, George and Ralph Pinder-Wilson, *Fustat Glass of the Early Islamic Period: First Finds by the American Research Center in Egypt 1964–1980* (London, Altajir World of Islam Press, 2001)
Seton-Williams, V. and P. Stocks, *Blue Guide: Egypt* (London, A & C Black, 1988)
Stewart, D., *Great Cairo: Mother of the World* (Cairo, The American University in Cairo Press, 1996)
Stierlin, H., *Islam, Volume 1: Early Architecture from Baghdad to Cordoba* (Cologne, Taschen, 1996)
Stierlin, H. & A., *Splendours of an Islamic World: Mamluk Art in Cairo 1250–1517* (London and New York, Tauris Parke Books, 1997)
Tabbaa, Y., *The Transformation of Islamic Art during the Sunni Revival* (London and New York, I. B. Tauris, 2001)
Talbot Rice, D., *Islamic Art* (London, Thames & Hudson, 1965)
Thoreau, P., *The Lion of Egypt: Sultan Baybars I and the Near East in the Thirteenth Century* (London and New York, Longman, 1987)
Walker, S. and M. Bierbrier, eds., 'The Fayum and its People', *Ancient Faces: Mummy Portraits from Ancient Egypt* (London, British Museum Press, 1997)
Ward, R., *Islamic Metalwork* (London, British Museum Press, 1993)
Ward, R., ed., *Gilded and Enamelled Glass from the Middle East* (London, British Museum Press, 1998)
Wessl, K., *Coptic Art* (London, Thames & Hudson, 1965)
Williams, C. 'The Cult of Alid Saints in the Fatimid Monuments of Cairo', *Muqarnas*, vol. 3, ed. Oleg Grabar (Leiden, E. J. Brill, 1985)
Yeomans, R., *The Story of Islamic Architecture* (Reading, Garnet Publishing, 1999)

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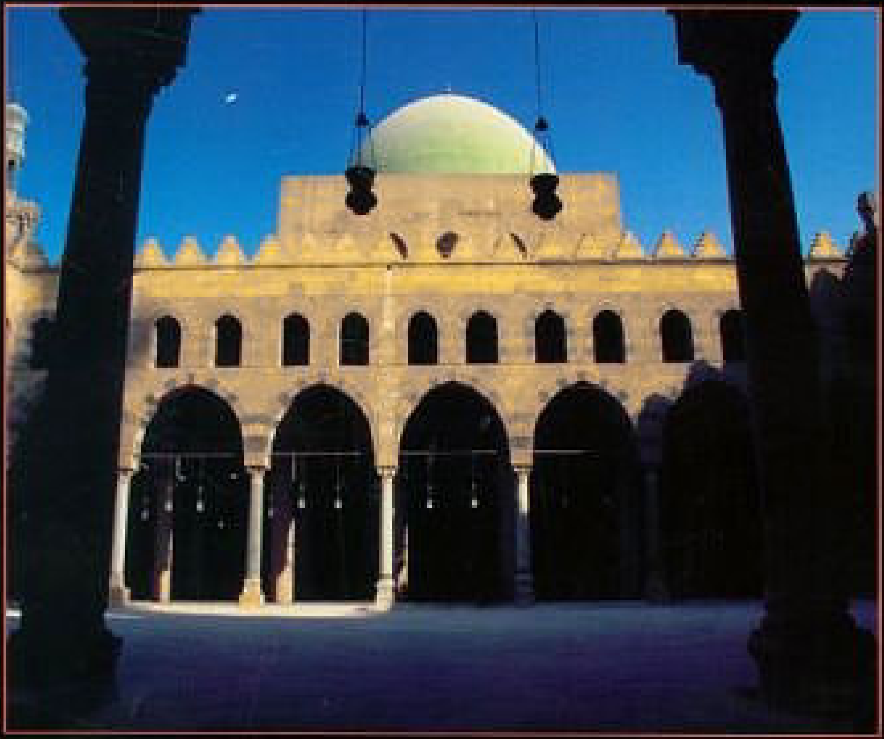
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Richard Yeomans is an independent scholar who was formerly a Senior Lecturer at the Institute of Education, University of Warwick, where he was the Co-ordinator for Art and Design. The author of *The Story of Islamic Architecture*, he is also a painter who has regularly exhibited his work in solo and mixed exhibitions in London, the Midlands and abroad. The Islamic architecture of Egypt has been the subject of his painting for many years and this book is the product of that intimate visual knowledge and experience.

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